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

Cooperative Agreement No: 121-A00-98-00631-00

Funded by  
The United States Agency for International Development  
Mission for Ukraine, Belarus, and Moldova  
19 Nizhniy Val Street  
254071 Kiev, Ukraine

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**Seventh Quarter Report**  
**April 1, 2000 ~ June 30, 2000**  
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July 2000

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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July 31, 2000

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**Seventh Quarter Report for the Period April 1, 2000 to  
June 30, 2000. USAID Cooperative Agreement  
No: 121-A00-98-00631-00**

Dear Dr. Muliar:

Enclosed please find the Seventh Quarter Program Report for the above Cooperative Agreement executed between USAID and the LSU AgCenter. The report covers the program activities for the period April 1, 2000 to June 30, 2000 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 by the World Laboratory in Kiev. The entire report will be e-mailed today to your office.

A separate report on the Impact Statements is currently being prepared. This document will be submitted shortly.

Thank you for your continued assistance and guidance.

Sincerely,

Lakshman Velupillai  
Director

cc: Dr. William B. Richardson  
Dr. Leonid Sereda  
Dr. Gennady Palshin  
Mrs. Margaret Blackwell  
Ms. Gloria White

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April 1, 2000 ~ June 30, 2000

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## Section I Summary

Despite this reporting period being a very busy period for the Vinnitsa farmer, the Ukrainian Center for Private Farmer Training and Outreach (UCFTO) has accomplished a wide range of activities under all four project objectives. Comprehensive discussion of each objective and activities under each objective are provided in this quarterly report.

Two Ukrainian faculty attended a short training program in the area of formal education at the Center as well as curriculum development. Two LSU AgCenter consultants also completed assignments during this reporting period, one, in the area of animal production/extension, and the other in the area of formal education. This latter LSU AgCenter specialist also conducted an evaluation of the UCFTO, particularly its effectiveness under the new organizational structure. The project also cosponsored and actively participated in an international conference in Kyiv that looked at potential national extension systems for Ukraine. The pace of technical assistance and project activities will be continued through the July-September period as well. At this writing (July 2000), one additional technical assistance consulting on formal education has been completed, and two are planned for the end of August.

Linking the Vinnitsa farmers through associations, input suppliers and other support mechanisms and networks is showing significant success as reported in this document. During this current reporting period, emphasis was placed on documenting and evaluating project impact on targeted beneficiaries. Data on these impacts in the form of "Impact Statements" is currently being prepared and will be submitted to USAID/Kiev shortly.

## Section II. Project Activities

### A. Introduction

Seventh quarter activities of the project involved a number of areas under each of the four project activities. Specific activities and results or impacts are described in detail below. Several attachments referenced in the narrative are organized at the end of the document.

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

This institution and capacity building objective was pursued on many fronts during this quarter. Included were the structural modification of the Center, legalization of the Center, work on creation of the National Ukrainian System of Extension, and faculty training.

#### Modification of the Center's structure

Since April 1, 2000, the Ukrainian Center for Private Farmer Training and Outreach began working on the basis of a new organizational structure, which includes in addition to administrative personnel (coordinators, administrative secretary, translator, accountant, driver) three basic units or departments:

1. Educational and consulting
2. Scientific
3. Organizational

The general functions of these departments are:

- Educational and consulting unit, led by Dr. Mamalyga, Vice Rector on Academic Process of the University, organizes and holds seminars and workshops, educational programs, consultations and other services for farmers. It comprises 5 groups of consultants: agronomists, animal scientists, economists, agricultural engineers, and the formal education team.

- Scientific department, under Dr. Petrychenko's (Vice Rector on Science and Research) leadership, plans and organizes demonstrations plots, implements cooperation between the Center and Research stations in the oblast, publicizes Center's activities in local media, publishes the "Farmer Library" brochures, produces educational videos and prepares radio programs. Three committees of this unit (demonstration, publishing, and video) help to implement the goals of the department.
- Organizational unit fulfills direct contacts with agricultural producers, studies farmers' needs and secures an appropriate response to them. It includes three faculty, Drs. Nedbaluk, Pryshliak, and Todosiychuk, who are responsible for the work of the raion offices. This unit consists of three groups on the basis of their geographic location (northern, eastern, and western).

Given this new structure, the Center's effectiveness and the performance was studied and analyzed by Dr. Satish Verma, Extension Specialist from the LSU AgCenter. To implement the assessment of the new structure, Dr. Verma applied a systems-based diagnostic matrix developed by Swanson (1994), which was adapted to analyze the UCFTO's performance. He also interacted with VSAU faculty/administration, raion specialists, project coordinators, regional supervisors through personal interviews to get their input. The process and the outcome of this assessment were documented by Dr. Verma. A copy of this complete report is found in Attachment A-1. Details of the new structure are found in Attachment A-2.

#### Legalization of the Center

A number of efforts to legalize the Center have been initiated during this quarter. After serious consideration it was decided to create an Institute of Consulting-Information Provision and Post-Graduate Education on the premises, and within the existing post-graduate department of the University. It will include Extension Department, UCFTO (formal and informal education, outreach), Post-Graduate Training Department, and Promoting Skill Department. This institute will have legal status. To pursue this goal a proposal was developed, approved by the scientific council of the

University, and submitted to the Ukrainian Ministry of Agrarian Policy. In response to this, the Ministry has already issued an Order, provided in Attachment B. Given below is a scheme of the University structure with the new Institute. This structure for the Center's inclusion into an existing Department of the University should significantly influence our financial sustainability beyond the project's USAID funding period.

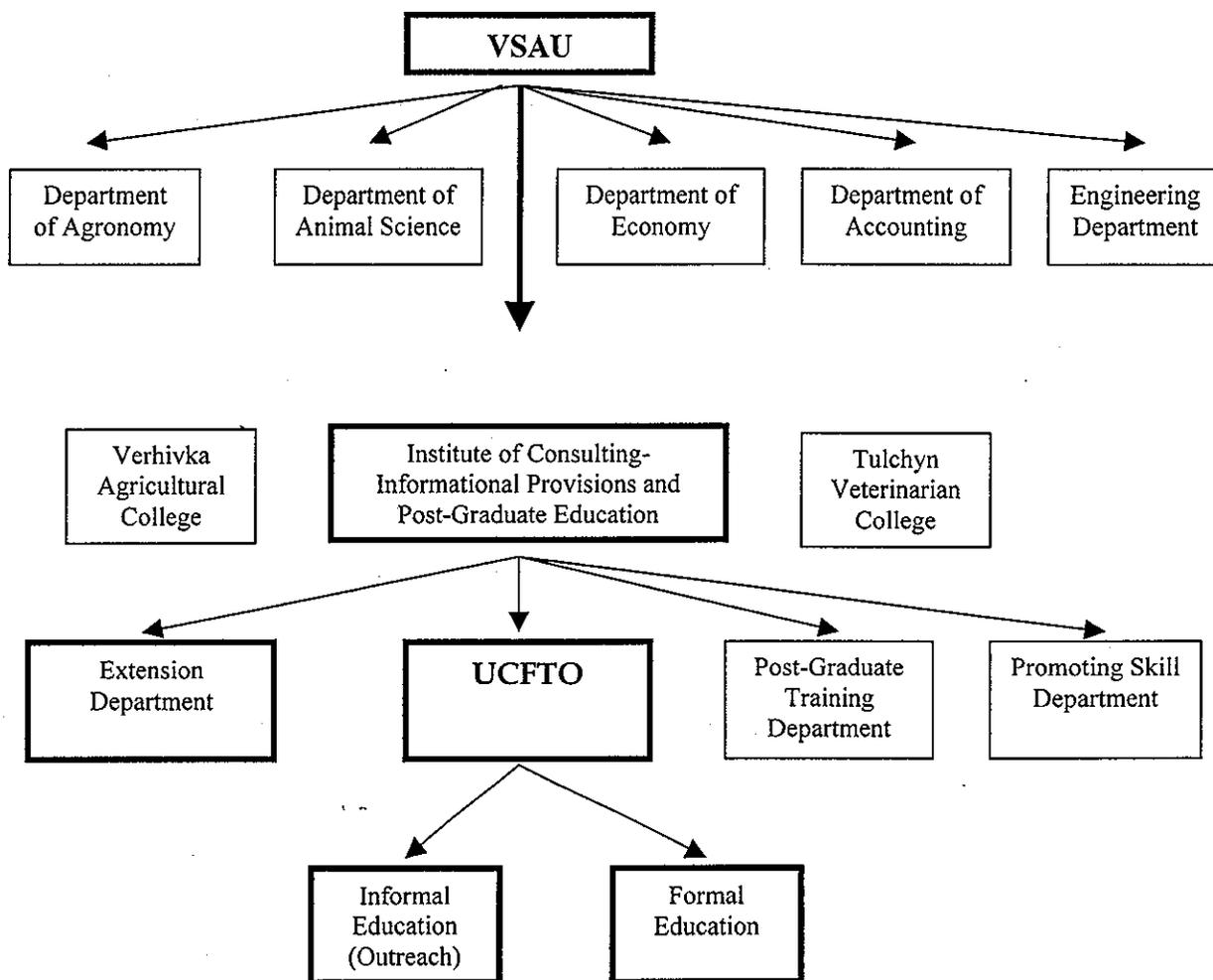


Figure 1. Organizational Structure.

### National Advisory System

For some time, the government of Ukraine has considered the establishment of an agricultural advisory system for the entire country. Much of the discussion has been centered on several points:

- effectiveness of organizational structure
- organizational dependence on available research
- links with research to continue development of appropriate data base
- sustainability of the system considering financial sources and other relevant factors

In anticipation of the formation of such a system, our Center engaged in several activities to prepare a suggested model based on our experience and on the experience of others in the former Soviet states for consideration by Ukraine. Included was a wide range of opportunities to exchange ideas with educators, government officials, regional and national level faculties, researchers, and others involved with policy formulation and determination.

Dr. Gregory Loyanich, the Ukrainian Project Coordinator, attended a three-day seminar in L'viv arranged by the Tacis project (FDUK 9601). The seminar was held for Oblast level government officials to inform them on possible avenues toward development of agricultural services. Dr. Loyanich delivered a presentation on our experience and participated in a wide range of discussions with other attendees and conference sponsors (Attachment C).

Dr. Loyanich, Larry Brock (U.S. project coordinator) and Wanda Yamkovenko (project associate and interpreter) attended and participated in a regional conference in Eger (Budapest), Hungary which was specifically geared toward sharing knowledge and Extension Service experiences with and among counterparts from eastern and central European countries. Our two coordinators related this project's successes and challenges and compared a university-based model with private and government ministry based systems (Attachment D).

Our project and its partners, along with other agencies at the regional and national levels, hosted an international conference on extension models in Kiev and Vinnitsia. Participation was from a broad range of relevant government officials, colleges and universities, farm-related groups, and advisory system representatives from a number of countries. The 3<sup>rd</sup> day of the conference was dedicated to a field tour of several components of our project including facilities at VSAU, project offices and structure, and some field demonstration plots (Attachment E).

An international advisory committee was appointed to study the conference reports, research available models and consider formulating an extension system for recommendation to Ukraine's national government.

In spite of these plans, the Ministry on Agrarian Policy has issued an order to oblast administrations to implement ministry based agricultural advisory services by July 1, 2000. They were given direction to establish an Oblast directory with six specialists and administrators and assign 3 employees to each raion and provide funding from the oblast and raion budgets.

In Vinnitsa, as is suspected in most oblasts, the financial situation will hardly allow proper funding of an effective extension system. Dr. Leonid Sereda, VSAU Rector has proposed to the oblast administration that they assign all extension service functions to the Center. The Center will provide a salary for an agricultural consultant based in each raion not already covered directly by the project. The oblast and raions would provide offices, phones, and office equipment including computers. The oblast officials have supported that proposal and consultations among parties are presently being held to develop a more detailed plan for consideration toward possible implementation

### Faculty Training

Two of the project faculty from Vinnitsa, who have been assigned to plan and coordinate the formal education component of our mission and continuing education for staff, completed a ten day training program at LSU. It was a discussion of the first

curriculum for formal education, which they developed, and a series of presentations of LSU specialist on curriculum development, adult learning, and nontraditional education techniques. The schedule of this program is included in Attachment F.

Project faculty consultant Yury Vanzhula participated in a three-week training program organized and conducted by the Canadian Agency of International Development. The intent of the training was to provide a comprehensive course on beef cattle production and necessary components. Mr. Vanzhula had an opportunity to provide attendees with full information about our project, as a response to a request by the Canadian sponsors. The knowledge and skills gained by Mr. Vanzhula at this seminar would be very useful, as educational plans for the third year of the project are developed. A complete report is found in Attachment G.

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

For the development of this objective, several activities were conducted in this quarter. These include 3 seminars and 2 field days, farm visits, and individual consultations, given by the faculty consultants for the farmers; registration process for legalization of our Credit Union; agribusiness links with the Center; strengthened cooperation and ties with the growers associations; and further development of the Information Support System (ISS).

#### Seminars/Workshops

Due to intensive field activities by farmers during this season, almost all seminars were arranged in the regional offices closer to clientele location. Main topics of the seminars and field days were:

1. 4-H clubs activity - A seminar was held on the 12<sup>th</sup> of April, in Lypovets raion. 48 people - young farmers, farmers' children, and young people from Lypovets took part in the seminar. The purpose of the seminar was to organize adolescents and plan on future activity.
2. Some specific technologies of growing grain crops, vegetables, and feeding crops - Theoretical part was held at the University, and practical seminars - on the basis of

our demonstrational plots in Illintsi College on the 24<sup>th</sup> of May. There were 60 participants – farmers and specialists from restructured collective farms. New technologies of crop production were presented and explained to agricultural producers.

3. New system of farm accounting and taxes - This seminar was arranged in Tulchyn raion for accountants of the reformed private enterprises. The seminar lasted for four days, and there were 78 participants.

4. Field Day on Assessment of variety resources and technologies of agricultural crops production - This was held by Illintsi regional office on the sites of a private farm (Farmer Mr. Fil) and the agricultural college. Twelve farmers of Illintsi and Lypovets raion participated at this field day. The most appropriate varieties of crops for the area were shown and recommended.

5. Field Day on Potato production and plant protection means - this was held at Shargorod regional office on the site of a private farm (farmer – Mr. Gzhebinsky). Total number of participants was 20 people from Shargorod and Zhmerynka raions. Farmers put forward many questions and proposals. They took great interest in bio products produced by World Lab scientists and tested on this farm.

In spite of a busy season, it could be said that our seminars embraced a wide range of topics and were found helpful by the clientele.

Farm visits and consultation.

This quarter was a busy season for farmers and for this reason it was very important that our field specialists spent much of their time on the farmers' plots. They collected requests and questions, and tried to respond as soon as possible, by themselves or with the assistance of the University consultants. The number of consultations given by the faculty, their publishing activity, participation at seminars and workshops is given in the table below.

Consultations	Seminars	Fact sheets	Articles	Brochures
145	14	2	6	2

In early May, the two coordinators with Wanda Yamkovenko (project associate and translator) and respective regional supervisors, traveled to nine of our 13 raion offices for consultations. There were several reasons for these visits:

- Inspection of office facilities and equipment for adequacy and functionality
- Assessment of completeness of agents' records of farm visits, phone calls, responses to farmer questions and other relevant information
- Assessment of agent needs especially regarding office facilities, equipment, university faculty support, and farmer library materials
- Preliminary assessment of new organizational structure which was implemented April 1, 2000
- Assessment of agent performance and understanding of roles and responsibilities

Three of the raion/regional offices had agents who were recently employed. Each seemed enthusiastic, knowledgeable on subject matter and extension philosophy, and knew the farming situation. This could be taken as a positive indication that deeper understanding of extension work by project administrators has led to expectations toward hiring uniformly qualified personnel possessing identified skills. Over time, this could lead to less need for supervisory time on the part of administrators. In turn, time devoted to training and skill enhancement will increase.

There exists a mix of older field specialists with prior experience in the farm community and younger individuals with limited experience. Although there are considerable differences (as would be expected) on a number of levels, all field specialists have sufficient strengths to plan and deliver high quality education programs to the agrarian communities

Offices also varied rather widely in terms of capacity, but all were more than adequate for program delivery. Three of the nine locations still do not have private offices deemed essential for farmer consultations. Discussions were held with respective raion administrators and agents were reassigned to private offices in two

raions. Telephone services and computers are still needed for three raion locations. Specific plans are in place to rectify this situation no later than August 1, 2000.

Review of office records showed too much variance with respect to record keeping and procedures were subsequently developed and implemented to create a functional and uniform system of records at the raion level. This new policy should also enhance the quality of reporting after a brief period of adjustment to the procedures.

Reliance on faculty specialists also varied widely with more experienced agents expressing little if any dependence on university specialists for technical subject matter support. Other less experienced agents expressed frustration with difficulty of reaching faculty and lagging response time for getting information back to farmers. This issue has also been addressed in Dr. Satish Verma's evaluation and report and policy will be developed and implemented to remedy this.

Raion agents also asked for development of additional farmer library materials. This issue has already been discussed with faculty and several new publications have been developed and are being printed for distribution.

Although work load and effectiveness of the Center's teaching efforts were determined to be relatively high, internal inconsistencies indicate a need for accelerating internal training programs. Development of uniform administrative policies is also necessary for continued improvement. The Center also needs to standardize agreements with raion administrators requiring a specific level of office support from local budgets.

U.S. specialist, Mr. James Devillier, visited the Center with an assignment to evaluate, in cooperation with Ukrainian scientists/extension agents, the current status of animal production activities with suggestions to future direction. He interacted with several VSAU faculty and field personnel during farm visits, evaluated animal science

demonstrations on the quality, timeliness, and relevancy of the trials. Mr. Devillier gave many recommendations to the livestock growers. To assess the current livestock feeds situation, Mr. Devillier worked with our faculty and visited with the scientists of the Feed Institute (a Research Institute in Vinnytsia). He was able to evaluate the quality of locally grown feed crops, discussed with the faculty their ability to integrate these feedstuffs into least cost feeding regimes. While conducting farm visits it was possible to determine current livestock phenotypes and capabilities and advice farmers on the ways of improving genetics, utilizing current reproductive technologies. To prepare our faculty and field specialists for conducting demonstrations and farm visits, two seminars were held at the University on "Conducting Result Demonstrations", and "Farm Visits", with a full set of interesting suggestions and a detailed plan for a demonstration. A complete report by Mr. Devillier is found in Attachment H.

#### Demonstration Plots

During the demonstration plot committee meetings, plans were discussed and made for demonstrations to be on private farms, household plots, and Vinnytsia Agricultural University fields.

Twenty six demonstration plots were implemented on private farms and HPOs in different parts of Vinnytsia Oblast to demonstrate the effectiveness of cleps, growth stimulators, herbicides, insecticides, and fungicides on a variety of crops.

According to the plan, field agents and university faculty specialists have responsibilities to closely monitor the demonstration plots. Staff have been monitoring the growth rates in control and test plots. Careful observations on weed control are made and the inputs shown to be most effective are noted.

Private farmers Kuzminsky, Ischenko, Flora, Hzebinsky, with the assistance of field agents and university specialists have demonstrated the effectiveness of herbicides "Basis" and "Titus" on corn varieties. In Kryzhopil rayon, at the Flora private farm,

demonstrations were set up on forage crops, and a demonstration on evaluating the productiveness with a Ukrainian breed of dairy cattle.

In Lypovets and Shargorod raions the Center's regional offices implemented plots and at the Vasiliev private farm. Demonstrations were set up for yields of five carrot varieties and potatoes for market and seed. A Shargorod rayon private farm has demonstration plots evaluating quality in melon production. On June 26, 2000, field days were organized and 46 farmers participated.

Specialists from the Center prepared and published five brochures for the "Farmers Library Series" that include one on crop production, one on livestock and three on farm economics and financing with loans. Seven brochures on technological and economic issues dealing with crop production are being prepared for publishing.

Published in Vinnytsia Private Farmers Association Newspaper "Budniy" and regional newspapers were eight articles by the Center and consultative information with effective approaches to farming. Additional eight articles have been submitted to "Budniy" on different topics on agricultural production.

The committee organized a program and outlined its demonstration work for the May 21-26 International Conference on Extension Service Development. On May 24, 2000, the committee gathered private farms for a seminar to coincide with the conference and guests and farmers were able to interact.

Also, four seminars on various agricultural production issues were arranged at private farm sites. Two informational newsletters on feed production have been distributed.

### Credit Union

Lack of credit at reasonable terms is a critical issue for farmers in Vinnitsa. As a response to farmer requests, the Center has initiated creation of a farmer credit union. The elected management board took the following steps in exploring establishment of a credit union:

- Reviewed of documentation on existing credit unions in Ukraine.
- Consulted with administrators of the National Association of Credit Unions in Ukraine.
- Consulted with officials of an active credit union in Poltava Oblast.

Based on their findings the credit union management board developed a proposed charter. It was submitted to the Oblast Branch of the National Bank of Ukraine for review and approval. The bank's suggested corrections were incorporated into the charter. The proposal was then approved, three necessary copies were submitted to the Vinnytsia Oblast Legislation Office, and the Credit Union then received proper legal status.

The credit union charter was subsequently sent to the Statistic Management Office and the Tax Office of Vinnitsa Oblast for review and further processing. We anticipate receiving an assigned tax identification code within thirty days and required papers have been submitted to Vinnytsia Regional Branch "Prominvestbank" of Ukraine to open an account.

Farmers were kept informed on the progress with respect to the formation of the Credit Union at one seminar in Kalynivka raion, and during two farmer meetings on the same topic scheduled in Lipovets and Khmelnik raions.

### Exhibition - "AGRO - 2000"

The Center organized a field trip to an exhibition in Kyiv titled "AGRO - 2000" to provide an opportunity for farmers and staff to be informed on agricultural inputs, markets and technologies that are available in Ukraine. All 13 raion agents and 36

private farmers from different areas of Vinnytsia oblast had a chance to visit this exhibition and gain valuable knowledge concerning farm input availability, technical production articles, and potential product markets to increase profitability.

The exhibition was held in Kyiv on June 7-11, 2000 and organized by the Ministry of Agrarian Policy, State Committee of Production Policy, National Farmers' and Private Household plot Owners' Association, Educational Center 'Ukrsilgospmash,' "Ukrpromtehnika," and International exhibition of two Polish provinces Pomorie and Kuyaviya.

Some farmers from Vinnytsia oblast signed contracts with agribusinesses for purchasing new seed varieties, agrochemical and other inputs. Beside that, the project staff had an opportunity to review logistic issues in organizing such an exhibition and plan a similar activity in Vinnytsia oblast under the name "Podillia Exposition". It is planned to be held August 10, 2000 at the Vinnytsia State Agrarian University and will feature agricultural products from private farmers and about 20 private agribusinesses. Ukrainian Center for Private Farmer Training and Outreach, Ukrainian Research Feed Institute, Potato Research Institute, and Research Orchard Station will provide consultations for private farmers during the exhibition.

Plans for this event are progressing satisfactorily with collaboration and support from the Oblast Administration, Oblast Farmer Association, 2 regional growers' association and the above research stations. The next quarterly report will include more details regarding effectiveness of this approach as a teaching tool.

#### Information Support System

The following are the activities completed by the World Laboratory in the development of ISS.

1. Development of the software for plant protection consulting package of the ISS has been initiated, in particular, completed are
  - screen form for the weed group structure identification;

- screen form displaying the set of herbicides recommended for the specific group of weeds;
  - a program which allows to define if the selected weed group requires special control measures along with a list of herbicides applicable to do this;
  - a set of tables for the database providing comparison of cost characteristics of application of different herbicides from the proposed list;
  - the algorithm to define the optimum set of herbicides recommended for application at various crops.
2. A new expanded approach has been worked out for characterization and description of diseases and weeds in the ISS database. Particularly, it covers typical symptoms, biological features of the causative agent, damaging effect caused by disease, and protection scheme as applied to disease characterization. As applied to the weed description it now features adult plant, shoots and seeds, including temperature of germination, and damage effect.
  3. A new software has been completed in order to assure construction of allowable crop rotation patterns and choice of the most rational ones for the selected set of crops.
  4. Tables of codes for various crop rotation patterns and those showing possibility of growing selected crops within the specific crop rotation pattern have been set up for 248 crops.
  5. In all, 273 pictures of weeds, pests and diseases have been downloaded into the ISS databases.
  6. The knowledge base of the weed classifier has been widened by the following tables:
    - description of primary signs of dicotyledonous weeds (leaves and cotyledons);
    - codes for the plant structure description;
    - relationship between primary signs and weed species.
  7. New and updating entries have been completed for 80 weed species, 150 varieties of fruit crops and 400 varieties of the grain crops.

8. The database on private farmers embraced by outreach service under the project now has 704 entries from the overall 825 farmers registered in Vinnitsa Oblast.
9. A computer program, which allows graphical juxtaposition of phases of plant cultivation technological cycle with dates of sowing and mass manifestation of the plant growth stages of both current and preceding crop has been developed. It will assure timing and duration of various operations required in each phase of the technological cycle.
10. A subprogram providing the on-line analysis resulting in recommendation whether the given crop is suitable for cultivation in the specific area, has been developed as follow-up to the earlier program designed for comparison of sum of active temperatures and duration of vegetation period in the given area with the vegetation period of a crop variety.
11. The database on the whole list of technological operations possible in cultivation of major crops - winter and summer wheat, winter and summer barley, winter and summer oats, sugar and fodder beet, corn sunflower and buckwheat has been structured and completed with data (total 2870 entries in 9 fields). The data base covers the following information -
  - a set of technological operations applied in dry farming following the routine, power saving and biological procedures;
  - each of the above procedures is also described for cases with water and wind erosion;
  - each one is described for both power saving type of cultivation as well as intensive cultivation;
  - all technological operations are grouped by kinds of work, i.e. use of agricultural machinery, fertilization, seeds pretreatment, sowing, protection, harvesting, land development etc.;
  - each of technological operation considered is referenced to the stages of the technological cycle - basic tillage, pre-sowing cultivation, care, and harvest;
  - and finally, each of those stages is referenced to the season - either spring and summer or fall and winter.

12. Package of programs for computing the self-cost of the end product and estimate profits has been worked out as well.
13. Digitization of the soil map of Vinnitsa Oblast continued - by 4 raions monthly. As of today, 20 raions have been covered. Work on the 6 remaining - Barshad', Kryzhopil, Chechelnyk, Pechansky, Yampolsky, Mohyliv-Podilsky is in progress.
14. The soil zoning by texture and fitness for major crops has been completed and laid on the digital map of Vinnitsa Oblast.

### Agribusiness Links

This quarter the Center for Private Farmer Training and Outreach maintained agribusiness links and continued to receive support in providing information and education for private farms. A commitment to the Center has been established with U.S., European, and local agribusiness companies. It has evolved through an exchange of information at several roundtables to discuss the benefits of a partnership. Often mentioned at the roundtables were the difficulties for private agribusiness due to the outstanding debts by former collective farms and the Government of Ukraine insisting on playing a major role in providing inputs and markets. Participants stressed that a key to the development of private agriculture in Ukraine is to allow private agribusiness to develop. Representatives of agribusiness companies expressed a strong interest to engage private farms in partnerships and determined the possibilities could be enhanced if the Center is involved.

An area of focus for the Center has been demonstration plots as an important tool in educating private farms and developing the skills of project staff. It was decided that cooperation with agribusiness companies would increase capacity and effectiveness. Several of the agribusiness companies involved in this effort include Aventis, Bayer, Cargill, Cyanamid, DuPont, Hydro Agri, Monsanto, Novartis, Progressive Genetics, and Unisam. Demonstration plots were designed and implemented by the Center at the agricultural colleges and private farms. Expectations are that as a result of this cooperation, private farms are given more choice to quality, modern inputs and technologies available from agribusiness companies in order to be able to increase productivity and profitability. Private farms will also be assured that the Center's role

in linkages with agribusiness companies will be based on objective and unbiased information.

An example of cooperation established with an agribusiness company in an effort to address the needs of raising productivity has been with Kyiv Atlantic, a producer of high quality feed. While on assignment in June, the LSU AgCenter consultant, Mr. James Devillier, raised the awareness on the importance of addressing these concepts with the private farms. Mr. Devillier, a specialist in livestock breeding and genetics, made a decision to assist project staff with demonstrations in these areas. Kyiv Atlantic and Danam Farms, providing Danish genetics and technologies, discussed livestock sector concerns with Mr. Devillier. A Vinnitsa private farmer in Orativ Rayon was identified as fairly successful in his livestock operations in comparison with other farms, however, the farmer understood the need to improve upon the quality of feed and genetics. Kyiv Atlantic has been introduced to the farmer and have begun collaboration with project staff on setting up demonstrations with Mr. Devillier's recommendations.

Demonstration plots were also planned to measure profitability of the main crops in Vinnitsa Oblast. Relating to crop profitability, the Center has been keen on making private farms aware of its alternatives to traditional crops (Figure 2).

Cooperation in demonstration plots with Progressive Genetics, a company providing U.S. varieties of soybean to Ukrainian farmers primarily in Kherson and Poltava Oblasts, allows Vinnitsa farmers to learn more about the potential profitability of non-traditional crops. The farmers are introduced to high quality seed and are able to compare these with local varieties. This year Progressive Genetics indicated its interests in creating partnerships with a few Vinnitsa private farms. The Center made this information available to the Vinnitsa Private Farmers Association and the association identified interested private farmers. A total of five farms in different areas of Vinnitsa Oblast began consultations with the Center on soybean production.

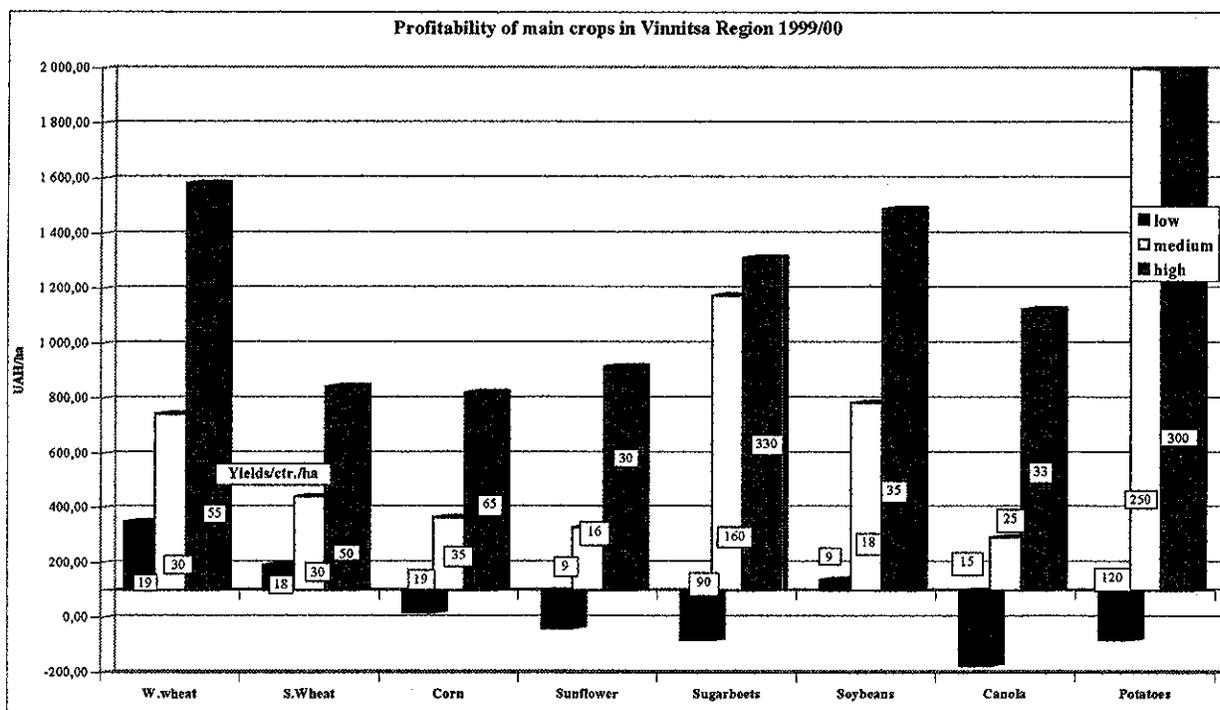


Figure 2. Profitability of main crops in Vinnitsa Region 1999/00 (Source: DUAP, Wilhelm Kruse)

Following consultations involving project economists, agronomists, and rayon agents on market-oriented farm management techniques (Table 1) and agronomic topics (soil preparation, seed rate-dressing, fertilizer application, etc.), three farmers plan to grow soybean next year. Progressive Genetics has agreed to consider credit terms for seed and herbicides to these private farms based on the future support the Center aims to provide in technical assistance.

With the objective of educating private farmers, the Center has been linked to local agribusiness companies leasing land for agricultural production and applying western management and technologies. Agrochimtehnologia and Raiffhaissen, companies with German investment, are leasing 600 and 2000 hectares respectively in Vinnitsa Oblast. General Director of Agrochimtehnologia, Mr. Gerhard Rogali, suggested that cooperation with the Center and the two companies could begin with their hosting field days in August and September. Project staff and farmers that participate will have the opportunity to observe and learn from farm operations that are based on economic efficiency.

Farmers in Vinnitsa Oblast have come to realize the Center's capabilities to link them with agribusiness companies. This can be evidenced by the frequent requests to provide information on input suppliers and markets. The linkages created have continually expand and become another example of the Center's role in the development of private agriculture.

Table 1. Crop budget

### Example of Crop Budget for Soybeans

#### Gross Margin Calculation

Production level	/ Per hectare								
	low			medium			high		
	Total units	price UAH/kg	UAH	Total unit	price UAH/kg	UAH	Total unit	price UAH/kg	UAH
kg	900	1,1	990	2 000	1,20	2 400	3 300	1,25	4 125
<b>Total gross output</b>			<b>990</b>			<b>2 400</b>			<b>4 125</b>
<i>Variable costs:</i>									
Seeds kg	85	6	510	65	10,00	650	65	14,00	910
Min. fertilizer & manure kg									
<i>Innoculent</i>						68			103
<i>P2O5 (48%)</i>				35	0,89	31	110	0,89	98
<i>K2O</i>				40	0,70	28	120	0,70	84
Chemicals									
<i>Herbicides Basagran</i>	1	84	84	2	84,00	168	2	84,00	168
Stomp				2	36,00	72	3	36,00	108
Fusilade							2	68,00	136
<i>others</i>									
Casual labour									
Machinery (in UAH.)			375			400			550
Transport									
<i>others</i>			45			60			85
<b>Total variable costs</b>			<b>1014</b>			<b>1477</b>			<b>2242</b>
<b>Gross margin per ha</b>			<b>-24</b>			<b>923</b>			<b>1 883</b>

Source: DUAP, Wilhelm Kruse

#### Farmers and Growers Associations

The Center has been active with the Vinnitsa Private Farmers Association and smaller commodity specific associations to assist in their development. Organizing workshops and field days, the Center has increased communication between association members by providing a forum to discuss their problems. A monthly newspaper

"Budniy" published by the Vinnitsa Private Farmers Association has received support from the Center with information for articles and the financing of several editions.

#### *Apple Growers Association*

The Vinnitsa Apple Growers Association has been in existence for more than a year. Members of the association include mostly small, private farms. The association has the following goals:

- organize apple growers and coordinate activities
- create and promote educational programs
- understand and apply new technologies
- create a data base on apple production, marketing, and processing
- assist in production and marketing
- organize consultations on legal and economic issues

The Center cooperates with the apple growers association on a regular basis. This quarter two workshops and one field trip were organized. The field trip was of special significance as three association members and one faculty person from the Vinnitsa State Agricultural University traveled to a neighboring oblast to become acquainted with a private farm growing apples according to Dutch technologies with support from the Holland-Ukraine Fruit 2000 Project. The Center had a video specialist accompany the group and collaboration has started to produce the first educational film for the association. This video was shown to the association members the following week at a workshop on marketing, jointly organized by the Center and the Holland-Ukraine 2000 Project. Requests were for a series of videos to be planned. In July, the Center will arrange for association members to attend an International Conference on Apple Production in Cherkassy Oblast and a second film is already being discussed.

The association has recently been considering forming a cooperative to market apples. This has led the Center to begin work for members to understand how to form a marketing cooperative. Members are interested in organizing an apple auction and for

this reason the Center has linked the association to the Kyiv Retail Traders Association to explore possibilities in marketing.

This quarter the Center has also assisted the association in producing its first monthly newsletter and advising on the importance of business plans. The head of the association has cited an increase in membership by twenty percent and attributes many of the memberships as a result of cooperation with the Center

#### *Potato Growers Association*

The Vinnitsa Potato Growers Association has been seeking the Center's assistance in many areas. It has been developing similarly to the apple growers association and therefore has had many of the same activities. Members include private farms and household plots. This quarter the Center assisted in producing a monthly newsletter and educational films for the association. The first film was videotaped at a HPO. It highlighted the characteristics of six varieties of potatoes and the quality of yields. A second video that is being produced covers small machinery in potato production. ADVIS, a local agricultural machinery supplier, arranged to provide small machinery during filming and has become a member of the association.

The association's intentions are to form a cooperative for input supplies. The Center has been requested to provide necessary information on cooperatives and the legal issues. Additionally, several inputs were donated to the association for demonstration plots to be designed by project staff for private farmer and HPO members. A field day was organized at one of the demonstration plots in Shargorod raion on a private farm with good results demonstrated from a biological deterrent to the Colorado beetle developed by Ukrainian scientists.

#### *Agricultural Organizations and Donor Programs*

##### *Ukrainian German Agricultural Development and Investment Project (DUAP)*

The DUAP technical assistance project has been operating in Vinnitsa Oblast for more than six months and has focused on crop production. Two agronomist and an

economist provide consultations to restructured and small farms. DUAP project staff have determined that collaboration with the Center is necessary and will lead to avoiding duplication. The Center has received support from DUAP in the provision of inputs, design, and implementation in demonstrations. A program on cooperating in areas of agronomic and economic analysis for farms has been developed. Staff from the Center and DUAP have reached an agreement to meet weekly to exchange information and decide on the best approaches to assist farms.

#### *Holland-Ukraine Fruit 2000 Project*

The Holland-Ukraine Fruit 2000 Project has been in Vinnitsa Oblast for two years working with the Podilla Fruit Research Station. The research station has planted 10 hectares in orchards according to Dutch technologies. Holland-Ukraine Fruit 2000 has been cooperating with the Center to reach and educate orchard farmers in new technologies. In June the Center organized a field trip to videotape a private farm growing orchards with Dutch Project support in Cherkassy Oblast in order to produce an educational film. The video was shown in a workshop on marketing jointly organized by the Center and the Dutch Project for the Vinnitsa Apple Growers Association. This June the Holland-Ukraine Fruit 2000 Project has approached the Center to assist in identifying small farms with good management and experience in strawberry production that would be interested in supplying strawberries on contract to a local processing plant. Farmer Bershan of Vinnitsa Rayon has been the first farmer to be proposed and will consider three hectares for next year.

#### *ACDI/VOCA*

ACDI/VOCA, a USAID contractor in agricultural technical assistance, collaborated with the Center in June with the volunteer program. Upon completing a short term volunteer assignment in Zaporizhie Oblast, horticultural specialist, Rick M. Bates, shared his experience with the Vinnitsa Apple and Potato Growers Associations on improving and updating technologies in gardening. Mr. Bates also provided contacts of his Zaporizhie hosts to the associations and has agreed to begin a program to exchange information on planting material.

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

To develop the Formal Education Component of the project two faculty, who were assigned to work on the curriculum for the first group of students, went to the U.S. for a training program and more discussions with the LSU faculty to finalize the curriculum and to learn more about nontraditional techniques in adult learning. The first curriculum was developed and approved by the leading specialists of LSU Extension Department and was recommended for the academic process.

A target group for the first Formal Education Program was determined earlier - it was new inexperienced farmers. The Formal Education team started advertising the program to recruit participants. The curriculum will give the attendees a possibility to learn more about farm management, business planning, land lease relationships, farm accounting and record keeping, taxes and a number of important farm legal issues. During the course students will be introduced to main technological processes of plant and animal production. They will be allowed to exert a considerable degree of freedom in selection of courses in accordance with the direction of their farm operation.

All faculty who will be involved in the program received an explanation of the necessity to consider specific approaches to teaching of this clientele, applied character of the courses and scientific information to be presented, nontraditional interactive teaching techniques. All faculty team took part in the seminar held on the 7<sup>th</sup> of July by Dr. Verma, the topic of which was "Non-traditional teaching methods in a formal education setting". Different interactive techniques were used in the seminar - role-playing, case study, and class debate - to engage the faculty.

With the purpose to expand UCFTO activity and to introduce VSAU students to Extension, it's been planned to include extension courses into the curricula of

undergraduate and graduate programs (masters course). Dr. Verma during his visit started discussions with the designated faculty about developing extension education curricula for (a) training of Center specialists and raion agents, and (b) post graduate specialization at VSAU.

In connection with the opening of the new Institute of Consulting - Information, the formal education team started working on the development of new curricula for the Extension Department of this Institute using the advice of Dr. Verma, a leading extension specialist from LSU. Three curriculum levels were discussed and will be pursued for incorporation into the course structure of the University: (a) 50-60 hours of instruction (4 credit hours) in the "Foundations of Extension Education" are planned to be included in all graduate courses (it must be discussed with the Department of Education in the Ministry of Agrarian Policy); (b) 135 hours of instruction (8 credit hours) in extension program development and extension methods may be included in all master's programs at the University; and (c) a master's program in extension education as per university requirements for course work and thesis research to train students for employment as extension specialists/advisors/agents.

The formal education team will consider the logistics of course development, preparation of course materials; will identify and gather reference books, will have to approve a course structure and content; schedule the beginning and implementation of the program; recruit and select students; assign teaching responsibilities, and analyze the possibilities of employment for future graduates. To assist Vinnytsia team, LSU specialist, Dr. Verma, will provide them with curriculum designs for three levels, including course titles, descriptions, reference books and materials, and any relevant lecture materials/notes used by LSU extension education faculty.

**D. Objective # 4: Agricultural Technology Research Programs**

The following are brief progress reports for objective #4 of the project.

**a. Endophytic Colonisation of Wheat (*Triticum vulgare*) and Rice (*Oryza sativa* L.) with Nitrogen Fixing Bacterium *Klebsiella oxytoca***

The objective of the April-June quarter was a design of practical method of the inoculum delivery which can be used in microplot experiments. In the previous quarter we compared two approaches for the inoculants design: 1) a heterophase cultivation of bacterium, *K. oxytoca*, with the natural mineral zeolite; 2) a zeolite saturation by bacterium (more specifically, bacterium filtration on the strength of zeolite (i) and plunging of zeolite into bacterial suspension (ii). Level of bacteria adhesion on parts of two fractions of klynoptelolit (N1 is 1-2,0 mm, N2 is 0,5-1,0 mm) was measured. Comparison of these approaches showed that the heterophase cultivation of bacteria gained more colony forming units per g of carrier. On the base of the latter Duceol-1 has been elaborated and tested on the 2-week seedlings. Trials exhibited increasing biomass of seedlings up 16 %. Laboratory procedure of "Duceol-1" development includes cultivating *K. oxytoca* VN13 in presence of 20 % zeolite (size of particles 0,5- 1,0 mm) in M9 minimal medium 18 h at 30 C. Final concentration of cfu/g after 18-h cultivating is 1.0E+12. Designed formulation of the inoculant was used for microplot experiment on wheat (*Triticum aestivum* L.). Seeds of wheat were inoculated with a dissolved and diluted inoculant "Duceol-1" (a final concentration 1.0E+8 cfu/ml). Dosage of the diluted inoculant was 10,0 l per 1,0 t of seeds. Control seeds were treated with tap water. 690 g of the inoculant were manufactured and conveyed for farmers of Vinnitsa region for field experiments.

**b. Isolation, characterization and utilization of insect resistance genes that will benefit Ukrainian and US agriculture - the Ukrainian progress report**

Last three months within the framework of the project associated with the study of new Ukrainian *Bacillus thuringiensis* (BT) strains, we conducted our investigations in 3 directions. The time during May-June is the time of Colorado potato beetle intensive

propagation. This season the experiments on demonstration to farmers of some BT strains insecticidal activity of spore preparations were planned. The demonstration was to be held on farmers' restricted potato areas. The aim of these experiments was to acquaint farmers with the properties of BT as bioinsecticide, and the demonstration of the advantages of BT. In particular, it's the safety to environment on the one hand and the efficiency to Colorado potato beetle larvae on the other hand. In the conditions of the Lab spore preparations of BT 949 and BT 014 necessary for 0,5 hectares of potato field were produced and handed to farmers as foliar spray with the usage instruction. Preliminary the dose of application was determined in laboratory experiments. The part of investigation devoted to the study of the range of pest insects susceptible to new Ukrainian BT strains is fulfilled at the LSU AgCenter. The necessity of widening the amount of strains appeared so that additional four new BT strains will be evaluated for toxicity against several insect species. We characterized these new BT strains, studied their plasmid array; identified their main insecticidal crystal proteins, which are produced during the sporulation. Also we cloned DNA fragments of Cry genes from two new perspective BT strains. The experiments on the cloning of gene, responsible for the insecticidal crystal protein synthesis were continued. The crystal protein of BT 949 was classified as Cry1B protein. It demonstrates a wide specificity - to some representatives of Lepidoptera and larvae of Colorado potato beetle, that's why it's convenient for transfer the endophytic bacteria in genome. In our investigation we used a versatile vector derived from F plasmid - pZC320 as a cloning vector. It was supposed, that this vector will allow us to clone a large BamH1 fragment of Bt 949 plasmid DNA (~15 kb). It carries a full-length copy of insecticidal protein gene as it was demonstrated in hybridization analysis. The screening of transformants was held by PCR using primers with a specificity to a homological Cry1B2a gene. The analysis of E.coli positive clones showed that they carried shortened derivatives of pZC320 with short fragments with a gene of interest to U.S. It made us use DNA of lambda phage as a cloning vector.

## Selection and characterization of Ukrainian strains of *Bacillus thuringiensis* active against insect pests – the U.S. progress report

The investigation of toxicity of new Ukrainian *B. thuringiensis* (Bt) strains against insect pests of Louisiana is in progress. Toxicity of these strains has been bioassayed against first instars of the lepidopteran pests sugarcane borer, fall armyworm and cabbage looper. We tested spore-crystal mixtures of nine Bt Ukrainian strains and two commercial Bt strains, EG2424 AFoil@(Cry1A, Cry3A) and EG2348 ACondor@(Cry1A, Cry2A) as standards. All Bt strains were grown on nutrient agar. The droplet-feeding method was used for bioassays. Concentrations of spore-crystal mixtures were determined by a spectrophotometer. After drinking the protein suspension larvae were placed on artificial insect diet and observed for 2 - 4 weeks, depending on larva development.

Sugarcane borer is a difficult target because it bores into plants and has low susceptibility to Bt toxins. Transgenic sugarcane, expressing newly discovered Cry proteins is a promising control strategy. The LD<sub>50</sub> of the standard Bt strain AFoil@ for *D. saccharalis* larvae was respective to 0.13 optical density (OD). Three replications with 30 larvae each were exposed to the Ukrainian Bt strains, at this concentration. Ukrainian Bt strain 85 had significant activity against *D. saccharalis* larvae. It's toxicity was lower, but not significantly different from that standard strain. Bt 85 produces Cry proteins with molecular weights ranging from 18 to 146 kDa.

High molecular weight (HMW) Cry proteins were then bioassayed. Solubilized HMW Cry proteins of Bt 85 again were less toxic than standard Bt strains. However, another Ukrainian Bt strains Bt1 and Bt88 were more toxic against *D. saccharalis* larvae than the standard Bt strains Foil and Condor. Three other Ukrainian strains (Bt3, Bt4, and Bt5) had toxicity similar to the standard Bt strains.

According to the previous investigation of these strains, Bt1 produces a 160 kDa Cry protein, coded by a gene of Cry1A family; Bt88 produces two HMW proteins (146 kDa and 137 kDa), one of which also is coded by cry1A gene. Bt3 contains a cry1B gene, supposedly encoding a 144 kDa protein. Bioassays with solubilized Cry proteins are continuing.

Fall armyworm (*Spodoptera frugiperda*) has low sensitivity to Cry toxins. The medium lethal dose (LD50) of Foil spores-crystal mixture was so high, that the LD10 (2.0 OD) had to be used in bioassays of the Ukrainian strains, with four replications. No Ukrainian Bt strains were as toxic to *S. frugiperda* as Foil. We now plan to bioassay solubilized Cry proteins against *S. frugiperda*.

Cabbage looper (*Trichoplusia ni*) is susceptible to Cry toxins and is able to develop resistance to these proteins. Discovery of new toxins could help to counteract this resistance, especially if coded by cry1B or cry1F genes. Bioassays of the standard Bt strains against *T. ni* first instars produced LD50 of 0.20 OD. All Ukrainian strains were tested against *T. ni* at this concentration (five replications with 30 larvae each). Bt6 strain was more active, than both of the standard Bt strains, and strains Bt4 and Bt3 had toxicity similar to the standards. Bt6 produces a Cry protein approximately 170 kDa, Bt4 produces several HMW Cry proteins (approximately 170, 150, and 130 kDa), Bt3 produces a 144 kDa Cry protein, coded by a Cry1B gene. Bioassays are planned with the separated HMW Cry proteins.

Bioassays of Ukrainian Bt strains against red imported Fire ants and Formosan termites detected no activity against these insects. Each strain was tasted against 50 fire ants (one replication) and 20 termites (2 replicatoinis with 10 insects/replication). Thus, six Ukrainian Bt strains will be of further interest: Bt1, Bt88, Bt3, Bt4, and Bt5 against *D. saccharalis*; and Bt6, Bt4 and Bt3 against *T. ni*.

c. **Development of the way for gene vaccines creation on the basis of the system assembling in liposomes**

The first set of mice BALB/C immunization experiments with the prototype of DNA-vaccine against CSFV has been performed. The construction used for the immunization consists of the gene E2 fragment of CSFV under CMV promoter in terminal repeats (scheme - Figure 3).

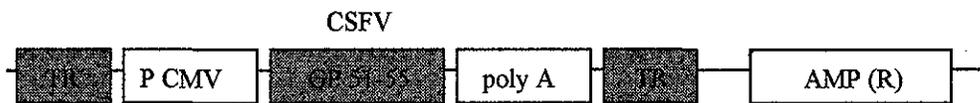


Figure 3. Construction of DNA - vaccine (prototype) against CSFV.

Immunization was made with the 100 mkg of plasmid DNA in 100 mkl of PBS or in liposomes. The first and the second immunizations with the interval of 2 weeks was performed only with DNA; in 8 weeks the last - third-immunization was made with DNA or CSFV recombinant protein. Plasmid without the insert served as the control.

Sera obtained were tested in ELISA with the CSFV recombinant protein and in immunoperoxidase test with the referent strain Alfort of CSFV.

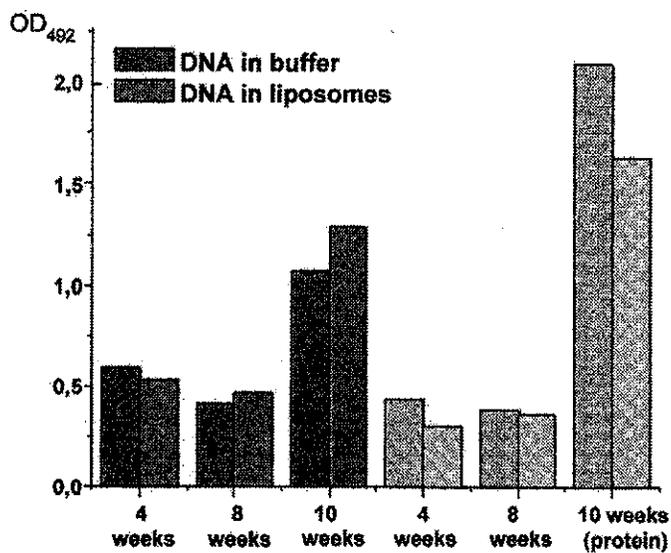
Results are shown in Figure 4. From the data presented one can see the following:

1/. Higher titers of antibodies (Ab) were received with the use of PBS than with liposomes;

2/. The use of the recombinant protein in the last immunization as the booster led to the large increase in Ab titer. This shows that the immunization with the developed construction of DNA-vaccine was successful.

The cycle of piglets immunization with the CSFV recombinant protein is finished. The sera obtained are being studied.

Figure 4. Results of Mice Immunization with DNA-vaccine against CSFV.



Results of mice immunization with DNA-vaccine against CSFV.  
10 weeks (protein) – 3<sup>rd</sup> immunization with the recombinant protein gp51-55 CSFV obtained in E.coli.

**Report on Assignment to Ukrainian Center for Private Farmer  
Training and Outreach  
May 18-June 10, 2000**

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## Executive Summary

The primary purpose of the assignment was to assess the performance of the Ukrainian Center for Private Farmer Training and Outreach, and continue work on the Center's formal education program.

A secondary purpose was attending the International Extension Conference, Kiev.

### Performance Assessment

The assessment was motivated by the fact that the Project is at the mid-point of its funded duration, the premise that a complex organization such as the Center likely has performance problems, and the notion that assessment results could be useful to improve the Center's performance.

A widely used systems model<sup>1</sup> was adapted to assess the Center's performance on five performance variables – mission/goals, system design, capacity, motivation, expertise - and two performance levels – organizational and individual. Eight VSAU/Center administrators and seven University and raion faculty were personally interviewed with a 30-question instrument. Audio tapes of the interviews complemented recorded notes. Organizational (administration) level and individual (faculty) level responses are presented as tables for the five performance variables and discussed.

From the interview responses and reports of the work of the Center in the last 18 months it is concluded that the Center continues to display many strengths, but also needs to deal with performance problems.

A motivated, capable, well-trained University faculty, the strategic deployment of faculty in raions, an appropriate and effective organizational structure, continued farmer trust and confidence in the Center's utility and work, and a valuable Information Support System are seen as significant strengths of the Center.

Performance problems of the Center appear to have their base in the lack or inadequacy of administrative, personnel, and programming policies and procedures, inappropriate decision-making and communication structures and processes, job-related issues of mobility, enrichment, and incentives, the salary and compensation system, and inadequate equipment, facilities, and resources in certain areas and work pockets.

The Center's performance can be improved by consolidating existing strengths and building new strengths, and addressing the problems uncovered in the assessment. It is recommended that a concerted effort be made to (a) produce documentation and guidance in personnel management and program development processes, and extension teaching methods and techniques, (b) establish a system for developing curriculum materials to support existing and emerging education programs in the field, and (c) enhance human performance by establishing job parameters, removing communication barriers and providing adequate resources and facilities, reward, recognize and provide incentives to faculty, be mindful of staff development needs, and use personnel and program evaluations as counseling and motivation tools.

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<sup>1</sup>Swanson, RA (1994). Analyzing performance of organizations: Tools for diagnosing organizations and documenting workplace expertise. San Francisco, Berrett-Koehler Publishers.

It is further recommended that (a) a reassessment of the internal effectiveness of the Center, and (b) a study of the Center's impact on improving the quality of life of farming and rural communities in Vinnitsa be done in summer 2001 to assist USAID and the Government of Ukraine as they consider the Center's future and its role in a national extension system.

### **Formal Education Program**

Based on ongoing work, discussion with University faculty, and support from the university/oblast administration, major steps indicated below are being taken to establish the formal education program:

1. Under the aegis of the University, establishment of the Institute of Post Graduate and Extension Education as a home for the Center's outreach and formal education (technical and extension education) programs. This Institute could be the organizing framework of the Center after the Project is over.
2. Development of a technical two-year agriculture diploma for new farmers and plans for the first class of farmers in fall 2000.
3. Incorporation of extension education courses in the undergraduate curriculum and master's specialties of the University.
4. Planning for a master's degree program in extension education to train University and raion faculty.

It is recommended that the Center take early steps to implement the proposed formal education curricula, with careful planning of the logistics involved.

It is also recommended that the "team teaching" aspect of the formal education program focus on non-traditional interactive teaching and not subject-matter instruction as initially proposed in the Project Plan. Extension faculty of the LSU Agricultural Center experienced in non-traditional teaching methods could serve on these teams.

### **International Extension Conference**

A paper "A Perspective of Extension Worldwide: Trends and Issues" was presented at the conference.

A working group to design a Ukrainian extension system was established at the conference. A scope of work for the working group has been proposed to the National Agricultural University of Ukraine.

## Report of Assignment

### Purpose

Assess organizational performance of the Ukrainian Center for Private Farmer Training and Outreach (UCFTO or Center), continue work on the formal education component, and participate in the International Extension Conference.

### Objectives

1. Collaborate with faculty of the Vinnitsa State Agricultural University (VSAU or University) and the UCFTO (Center) to analyze the performance of the Center.
2. Collaborate with assigned Center faculty to design the formal education curriculum.
3. Participate in the International Extension Conference.

### Schedule of Activities

The assignment began in Kiev on May 20 and concluded in Kiev on June 9, 2000. Scheduled activities included attending the International Extension Conference in Kiev from May 21-25, followed by two weeks in Vinnitsa to conduct a diagnosis of the Center's performance, and to plan the formal education curriculum. Appendix 1 gives details of these activities. The performance diagnosis strategy was developed and sent to the Center's technical coordinators in advance of the visit to enable them to make necessary adjustments and arrangements.

*Objective 1. Collaborate with faculty of Vinnitsa State Agricultural University (University) and the Ukrainian Center for Private Farmer Training and Outreach (Center) to analyze the performance of the Center.*

### Rationale

The rationale for analyzing the performance of the Center was based on the following precepts:

- (a) The Center is slightly past the mid-point of its three-year funding support from USAID; therefore, an assessment at this stage is timely in terms of making any adjustments to enhance performance in the remaining time.
- (b) The organizational structure and processes needed to fulfill the outreach education mission of the Center are complex. The Center is a semi-autonomous unit under the Rector of VSAU, led by U.S. and Ukrainian coordinators and staffed with University-based faculty and raion-based faculty delivering education programs to all private farmers in Vinnitsa Oblast. The Center is likely to experience performance problems arising from internal weaknesses and the influence of the external environment; hence, their identification and amelioration are important.
- (c) The Center was restructured on April 1 to relieve University faculty of the burden of supervising as well as giving technical support to individual raion faculty. This was done by dividing the oblast into three regions, and placing each region under the supervision of a University faculty. Knowledge of how this revised setup is working would be useful.

## Caveats

1. This is an assessment of the Center's internal operations and not the Center's education programs for farmers and farm families.
2. The short time available precluded a full and thorough on-site evaluation. Hence, some areas of inquiry could have been excluded and/or may not have been followed in depth. This is a limitation which could bias interpretation of results.

## Methodology

In selecting methodology for conducting this analysis, a systems approach was preferred over single-dimension analyses. Single-dimension analyses restrict themselves to a narrow set of problem situations and solutions. By contrast, systems analysis enables subsystems and their interdependencies to be examined in depth and detail to find holistic solutions.

A systems-based performance diagnosis matrix<sup>1</sup> was adapted to analyze the Center's performance. This is a two-dimensional matrix which enables the study of five performance variables – mission/goals, system design, capacity, motivation, and expertise – at three performance levels – organizational, process, and individual.

Two data gathering instruments were designed, one for University/Center administrators to elicit the organizational level perspective, and the other for University and raion faculty to determine the individual level perspective. The instruments contained series of questions grouped under the five performance variables. Dr. Ed Holton, Professor of Vocational Education, Louisiana State University, provided a battery of questions which was adapted to suit the purpose and focus of this analysis. Two versions of the instruments were developed – a long, test version with 45 questions which was used in four initial interviews, and short versions of the two instruments comprising 32 questions for administrators and 30 questions for faculty in which redundancies and inconsistencies were removed. The short versions were used for the remaining 11 interviews. Appendix 1 contains the two instruments. Questions that could be answered with a yes/no response were probed for further explanation or description during the interviews.

Personnel of the Center comprise 5 University/Center administrators, 3 regional supervisors, 13 University specialists, and 13 raion specialists. Since it was not possible in the limited time available to interview all 34 personnel, a total of 15 persons – five administrators, three district supervisors, three University specialists, and four raion specialists – were interviewed. Most interviews were conducted in the office of the U.S. Project Coordinator. A few interviews were done in the offices of the interviewees. An interpreter translated the questions and responses, notes were taken, and the interviews audio taped. The audio tapes were used to clarify or expand upon the recorded notes. No transcriptions were made.

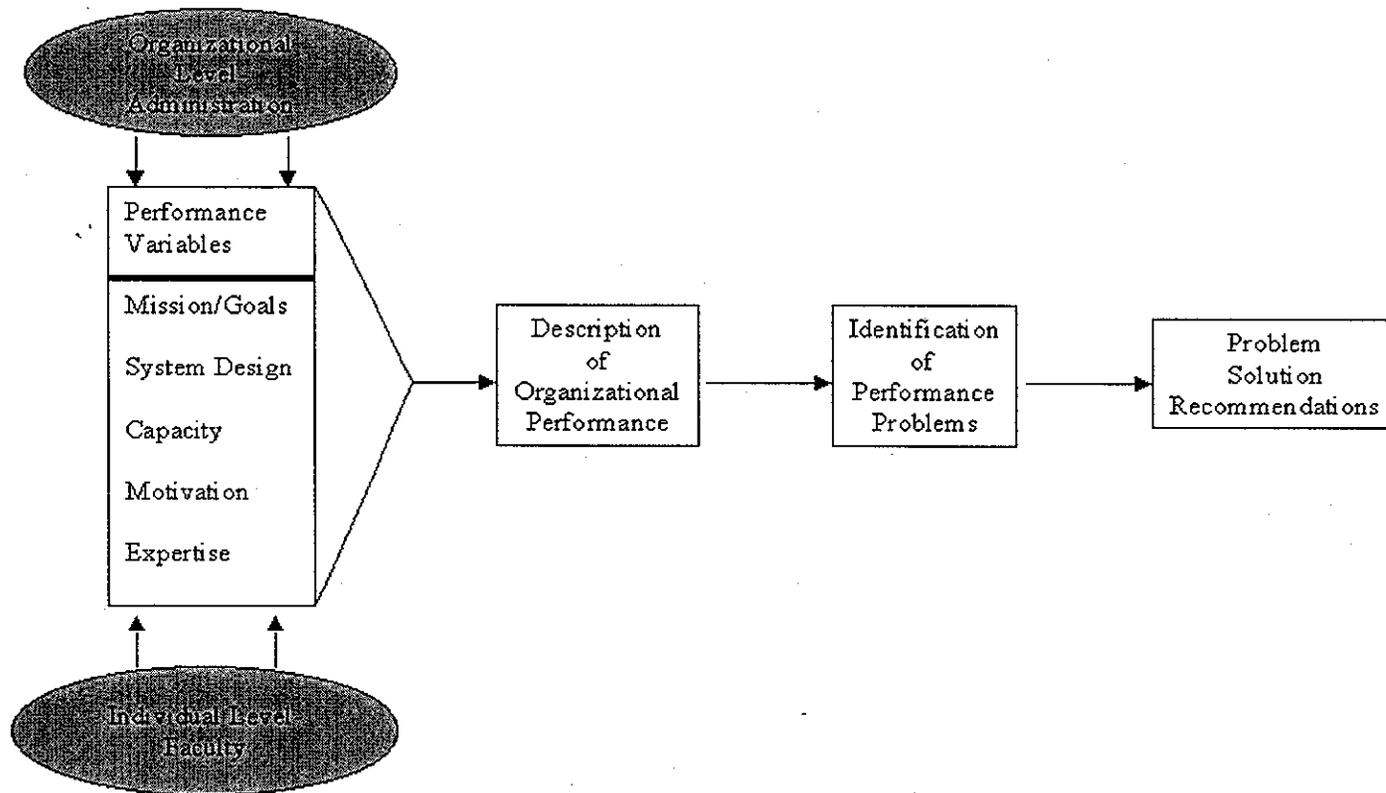
None of the interviewees objected to being recorded. They were assured that the interviews would be confidential, and that the analysis would not identify any particular individual. Each interview lasted 75-90 minutes on the average.

The analytical framework of the study presented in Figure 1 is anchored in the Swanson performance diagnosis matrix and adapted to the needs and constraints of the study. Following this framework, the interview data were analyzed first under the five performance variables. Significant statements from responses to the interview questions were selected and organized by respondent group – faculty reflecting

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<sup>1</sup>Swanson, RA (1994). Analyzing performance of organizations: Tools for diagnosing organizations and documenting workplace expertise. San Francisco, Berrett-Koehler Publishers.

**Figure 1. Performance Analysis Framework of the  
Ukrainian Center for Farmer Training and Outreach**  
*Adapted from Swanson, R. (1994)*



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the individual level perspective, and administrators representing the organization level perspective – for each performance variable. Based on these statements, additional clarifying informal discussions with faculty and administrators, and observation of personnel interactions during the assignment, the findings are presented for each performance variable. This is followed by conclusions discussing major strengths and performance problems of the Center's working. Recommendations of possible solutions to performance problems and directions for further study conclude the analysis.

## Findings

### Performance Variable: Mission/Goals

The organizational level question is: Does the organizational mission/goal fit the reality of the economic, political, and cultural forces? The individual level question is: Are the professional and personal mission/goals of individuals congruent with the organization mission/goals?

Statements selected from the responses of the administration and faculty groups to six items related to this variable are presented in Table 1 and discussed below.

*Faculty knowledge of the Center's mission/goals and work (strategic) plan.* Individual faculty responses to the Center's mission/goals varied and also differed from the written version, but captured its essence and spirit. From the organizational perspective, administration is looking to the future in terms of expanding the Center's mission/goals.

*Outcomes clearly stated and performance expectations known to faculty.* Faculty were aware that the Center's stated outcomes are improvements in farming, changes among farmers, and sustainability of the Center. This was corroborated by administrators who expressed, however, the need to identify performance expectations or standards.

*Understanding of job goals.* Faculty expressed their job goals in different ways but the ultimate focus was servicing the needs of farmers. Administrators felt the need to improve faculty understanding of job goals and suggested that specific standards set forth in job descriptions was a means to accomplish this.

*Effect of economic conditions, political climate, and cultural factors on the Center's work.* Both faculty and administrators had mixed views on whether the current political and economic forces were a benefit or barrier to the Center's mission/goals, but most felt that the impact was more negative than positive. The promise of a free market system, however, held out hope for better times. Both external and organizational politics were implicated. Tradition and lack of understanding of the concept of private ownership were suggested as barriers to realizing the Center's mission/goals.

**Table 1. Selected Statements of University/Center Faculty and Administration  
Regarding Mission/Goals**

Question	Faculty/Individual	Administration/Organizational
1. Faculty knowledge of mission/goals, work plan.	<ol style="list-style-type: none"> <li>1. Education, not just how but also why, so people can make decisions.</li> <li>2. Improving Ukrainian agriculture.</li> <li>3. People to live better.</li> <li>4. Ukraine to flourish.</li> </ol>	<ol style="list-style-type: none"> <li>1. Expanded scope should be added-Establish presence in other oblasts; collaborate with private sector; increase in number of new private farmers with varying backgrounds.</li> <li>2. Read work plan.</li> </ol>
2. Outcomes clearly stated and performance expectations known to faculty.	<ol style="list-style-type: none"> <li>1. Yes. 2. No.</li> <li>3. Farmers aware of and following new technology; self sufficient; cooperating with the Center.</li> <li>4. Sustainability of Center (financial)</li> <li>5. Increase farm efficiency, income.</li> <li>6. Improving life and wellbeing of farmers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Yes.</li> <li>2. Agents understand outcomes but performance standards are not in place.</li> <li>3. Changes in farmer's behavior is main outcome - our assistance is the main output to achieve these changes.</li> </ol>
3. Understanding of job goals, expectations, standards.	<ol style="list-style-type: none"> <li>1. Major problem in reaching goals is time and workload balance; need good planning and faculty commitment to overcome.</li> <li>2. Consultant role-serve farmers through education and information.</li> <li>3. High standards; ultimate test is farmers' opinion and changed behavior.</li> <li>4. Understand job goals, but not pleased with output.</li> <li>5. My goals coincide with Center's goals-teach farmers, learn with and from them; contact specialists and other information sources; raion agents have to respond quickly to farmers' questions and problems.</li> <li>6. Satisfying farmers' needs, and using all methods to achieve this, including consultation, service, and education.</li> <li>7. Meet farmers; determine problems; help in critical areas; help improve farm families quality of life.</li> <li>8. Make technical recommendations.</li> </ol>	<ol style="list-style-type: none"> <li>1. Job descriptions are in place.</li> <li>2. Cohesive teams, e.g. Demonstrations Committee.</li> <li>3. Differential understanding among faculty of job goals.</li> <li>4. Eastern Region agents understand their job goals and roles.</li> <li>5. Northern Region agents need to improve understanding through proper documentation (job descriptions).</li> </ol>

**Table 1 (cont'd): Mission/Goals**

Question	Faculty/Individual	Administration/Organizational
4. Effect of economic conditions.	<ol style="list-style-type: none"> <li>1. Favorable. Radical change is good.</li> <li>2. Unfavorable - e.g. laws of land unfavorable, underdeveloped credit system, high price of imports, low prices of agricultural products.</li> <li>3. Not favorable in the beginning for Center's educational mission, now people better understand the free market system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improving but still not stable. Therefore, Center's role is critical.</li> <li>2. Favorable because of the free market euphoria. May have to find alternative funding for Center including charging farmers, and making University consultants (specialists) self-supporting.</li> <li>3. Funding is always a constraint.</li> <li>4. Stimulus.</li> </ol>
5. Effect of political climate.	<ol style="list-style-type: none"> <li>1. Political influence is variable. National posture (in MOAR) is inimical to university-based system. It is important that we contest that position.</li> <li>2. Two new raion offices (Nemiroff and Bershad) are being opened for political reasons.</li> <li>3. Unfavorable political climate.</li> <li>4. Soviet domination for 70 years still has an adverse influence on people's minds and work ethics.</li> <li>5. Unfavorable for farmers; generally unstable (e.g. VAT had 107 amendments in one year).</li> <li>6. The Presidential Decree of December 3 is changing attitudes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Negative, even hostile attitude of MOAR toward the University based system. However, this should be an incentive for us to work harder and prove our system works and contributes to agriculture.</li> <li>2. Supportive local (oblast) administration.</li> <li>3. Generally a barrier.</li> </ol>
6. Effect of cultural factors.	<ol style="list-style-type: none"> <li>1. People are traditional and cautious; as the Center gains their trust they will be more open to change.</li> </ol>	<ol style="list-style-type: none"> <li>1. Greatest barrier is people's lack of understanding of the concept of private ownership and its implications in a free market system. We have to ourselves learn and then bring others along.</li> </ol>

System Design

The organizational level question is: Does the organizational system provide structure and policies supporting the desired performance? The individual level question is: Does the individual face obstacles that impede job performance?

Statements selected from the responses of the administration and faculty groups to seven items related to this variable are presented in Table 2 and discussed below.

*Appropriate and effective organizational structure.* Both groups commended the new organizational structure established April 1 as effective and appropriate. Most negative comments concerned the consulting function. Concern was expressed regarding adherence to a formal communication and coordination system for technical assistance from consultants and inordinately long response times. [Note: The terms consultants, University faculty, University specialists are used interchangeably in this report. They refer to the consulting/teaching functions performed by University faculty.]

*Job responsibilities centralized/decentralized.* Faculty who responded to this item were evenly divided, indicating generally centralized management or a balance of centralized and decentralized job responsibilities. Administrators felt job responsibilities were largely centralized, though not rigid, and favored this arrangement.

*Coordination of work.* Faculty cooperated with one another at the University and in raions as needed either directly or with the assistance of regional supervisors. Administrators felt communication among faculty was open, but that coordination of the Center's work could be improved through more proactive planning.

*Job flexibility, independence, and authority.* Faculty indicated there was freedom to plan programs and commended the advisory process for its value in program direction and agent autonomy. One administrator said it was important to build these job characteristics into job descriptions.

*Leadership and management practices.* Faculty appreciated the democratic leadership style of supervisors, as well as their open, caring, and strict behavior. One supervisor was described by an administrator as practicing authoritarian and democratic leadership as dictated by specific situations.

*Personnel management processes described, documented, and communicated to faculty.* Apparently, personnel management processes of the organization have not received the attention they deserve. Both faculty and administrators implied that a number of processes such as recruitment, selection, job descriptions, performance appraisal, promotion, and staff development have not been described, documented, and disseminated within the organization. It would appear that the Center has used University policies and procedures and/or improvised procedures as the necessity for them arose. The need to standardize and codify these procedures was expressed by both groups.

*Program development processes described, documented and communicated to, and also followed by faculty.* Following the training in the U.S. last year of University faculty and the training of newly hired raion faculty at the Center, progress has been made toward better faculty understanding of program development processes. Also, reporting processes have been documented and are being implemented. However, the remaining program development processes and policies governing their use need to still be developed.

**Table 2. Selected Statements of University/Center Faculty and Administration  
Regarding System Design**

Question	Faculty/Individual	Administration/Organizational
<p>1. Appropriate and effective organizational structure.</p>	<ol style="list-style-type: none"> <li>1. *New structure (April 1) is better than old.</li> <li>2. Good cooperation among faculty, e.g., take classes of those who may have a consulting assignment.</li> <li>3. Structure is appropriate and effective.</li> <li>4. New structure has relieved University specialists of administrative burden.</li> <li>5. One raion specialist contacts consultants through the Project Office and/or District Supervisor and records in computer.</li> <li>6. Current structure is good; but consultants (used interchangeably with University faculty or University specialists) should respond quickly to agent requests for help. Sometimes it takes a month to get a response.</li> <li>7. Consultant response time is critical but in many cases too long.</li> <li>8. Consultants should be proactive, eg., consultant teams (agronomist, economist, engineer, livestock specialist) should schedule regular visits to raions to meet with farmers and agents.</li> <li>9. Imbalance in consultant expertise- 5 economists, 4 agronomists, 3 livestock specialists, 1 engineer - vis-à-vis system needs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Appropriate.</li> <li>2. Positive after April 1 restructuring.</li> <li>3. Consultants' work could be improved in terms of workload and performance.</li> <li>4. Consultants' response to raion faculty/farmer questions should be streamlined.</li> <li>5. Faculty follow formal administrative communication system rather than the informal communication necessary to accomplish tasks. For example; a raion faculty requesting a consultant goes to the district supervisor, who goes to the supervisor of consultants, who then goes to the concerned consultant. Instead, the raion faculty should contact the consultant directly, and inform his/her supervisor. The consultant in turn can inform his/her supervisor.</li> <li>6. Consulting Department is appropriate as currently organized with a Vice Rector coordinating.</li> <li>7. Field work organizing department is effective. Regional supervisors and raion faculty have developed good relations with raion administrators in a short time (2 months).</li> </ol>

\*Developed by a committee - (district/regional supervisors, technical coordinators, vice rectors)

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**Table 2 (cont'd): System Design**

Question	Faculty/Individual	Administration/Organizational
<p>2. Job responsibilities centralized/decentralized.</p>	<ol style="list-style-type: none"> <li>1. More decentralized than centralized, with lateral communication, both within the Center and externally.</li> <li>2. Generally centralized. For example, University specialists have to go through the administrative chain of command (Vice Rector) to do field work. Vice Rector oversees 14 specialists in 5 subject groups; instead, this supervision could be delegated to a group leader and appropriate communication structure followed to keep the Vice Rector informed.</li> <li>3. Mostly centralized management. Vice Rectors are busy with University matters and may not have time to oversee Center's work.</li> <li>4. Both centralized and decentralized.</li> </ol>	<ol style="list-style-type: none"> <li>1. We have a top-down centralized system. This is good because staff cannot have complete autonomy. Raion agents need to be trained to accept more responsibility and make independent decisions. This will take time.</li> <li>2. Centralized, but not rigid.</li> <li>3. An appropriate balance of centralized and decentralized responsibilities. For example, personnel management is centralized, but program responsibilities are largely decentralized with appropriate coordination.</li> <li>4. Decision making about personnel and programs is mostly centralized. That's appropriate for personnel decisions. However, program decisions need to be decentralized in a grassroots, bottom-up structure to listen to people's voices.</li> </ol>
<p>3. Coordination of work.</p>	<ol style="list-style-type: none"> <li>1. Coordinate and cooperate in raion work with other raion faculty, both directly as well as through regional supervisors. Engaged in training, one-on-one contact with other raion faculty either to give or receive help. e.g., helped a new faculty in neighboring raion learn the computer.</li> <li>2. Worked with other raion faculty; e.g., helped with a tractor sale in an adjoining raion.</li> <li>3. Contact other raion faculty for assistance as needed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Coordination needs to be improved.</li> <li>2. Both reactive and proactive coordination. Reactive: Farmers request raion faculty-regional supervisor - Vice Rector - Consultant. Varying rate of response. Proactive: Farmers problems should be summarized by raion faculty/regional supervisors and submitted to consultants for long-range program planning.</li> <li>3. Open communication with Rector, U.S. Technical Coordinator, and LSU Ag Center Director of International Programs.</li> </ol>

**Table 2 (cont'd): System Design**

Question	Faculty/Individual	Administration/Organizational
<p>4. Job flexibility, independence, authority.</p>	<p>1. There is freedom to plan and conduct programs.</p> <p>2. Working with advisory committees can be very helpful to determine farmers' problems and needs. This process can empower raion faculty and legitimize programs, thus giving them more flexibility and independence in their work.</p>	<p>1. Important to build these characteristics into job descriptions.</p>
<p>5. Leadership and management practices.</p>	<p>1. Pleased with leadership and management styles, i.e., democratic supervision, open communication.</p> <p>2. Need to be more critical of faculty performance (i.e., give feedback).</p> <p>3. Leadership and management practices are appropriate. Appreciate supervisor as a good leader-demanding and strict but understanding, keeps in touch with raion faculty, counsels them and responds to their questions promptly.</p>	<p>1. Democratic. U.S. technical coordinator is a good role model.</p> <p>2. My supervisor practices a mix of authoritarian and democratic leadership styles as dictated by specific situations.</p>

**Table 2 (cont'd): System Design**

Question	Faculty/Individual	Administration/Organizational
<p>6. Personnel management processes described, documented, and communicated to faculty.</p>	<ol style="list-style-type: none"> <li>1. University specialists were selected from VSAU faculty based on background, specialization, and ability to work as a team; raion specialists were chosen by University faculty from those with an agronomy background and 2-3 years of field experience.</li> <li>2. U.S. trained Center faculty oriented and trained new raion specialists. A continuing process of training.</li> <li>3. Thought is being given to the promotion process.</li> <li>4. There is no systematic recruitment and selection process.</li> </ol>	<ol style="list-style-type: none"> <li>1. Center processes should parallel those of the University. Exceptions should be made for legal status/autonomy of Center, and unique nature of extension work.</li> <li>2. Job descriptions for regional supervisor, raion faculty, University faculty, demonstration committee have been written.</li> <li>3. Need to prepare policy statements and procedures for recruitment, selection, orientation, training, supervision, promotion and performance appraisal of all positions in the Center.</li> <li>4. Need to standardize all personnel policy and procedures.</li> <li>5. Need to establish criteria for raion faculty professional standards, technical knowledge, and business expertise.</li> <li>6. Personnel lack a clear understanding of their roles.</li> <li>7. When raion faculty were chosen, only one person was named in each raion by University specialists/regional supervisors. Need to change selection process.</li> </ol>

**Table 2 (cont'd): System Design**

Question	Faculty/Individual	Administration/Organizational
<p>7. Program development processes described, documented, and communicated to, and also followed by faculty.</p>	<p>1. Raion faculty were initially trained in program development. Need follow-up training.                  2. Know that a reporting system is being developed for raion faculty.</p>	<p>1. Following documents have been prepared and shared with raion and University faculty:                  (a) Directory of raions and districts.                  (b) Directory of specialists' technical areas and resources.                  (c) List of resource materials available in each raion office.                  (d) Monthly raion office activity report form.                  (e) Monthly consultant report form.                  2. Planning forms (long-range and annual) need to be developed for both raion and University faculty.                  3. Need to standardize all programming policies and procedures - planning, implementation, monitoring, reporting and evaluation.</p>

Performance Variable: Capacity

The organizational level question is: Does the organization have the leadership, capital, and infrastructure to achieve its mission/goal? The individual level question is: Does the individual have the mental, physical, and emotional capacity to perform?

Statements selected from the responses of the administration and faculty groups to three items related to this variable are presented in Table 3 and discussed below.

*Center's resources appropriately allocated, accessible, and adequate for job performance.* A few faculty felt resources to do the Center's work were adequate and appropriate. Most faculty, however, indicated resources were not adequate for either University or raion faculty. The organizational level perspective was that while resources for current work were adequate, additional resources will be needed as the work expands. Specific additional needs cited were a feeds analysis laboratory, office space for regional supervisors at the Center, and office space for University faculty at the University.

*Center faculty possess skills, knowledge, and abilities to perform the job.* Both faculty and administrators felt that University faculty and raion faculty have the technical expertise to do their job, but may need training in process skills such as communication, programming, and teaching.

*Expectations of supervisors regarding faculty workload, time, and job performance.* A variety of expectations by management of University and raion faculty was indicated by both faculty and administrators. Some felt these expectations were reasonable, others felt the expectations were high.

**Table 3. Selected Statements of University/Center Faculty and Administration  
Regarding Capacity**

Question	Faculty/Individual	Administration/Organizational
<p>1. Center's resources appropriately allocated, accessible, and adequate for job performance.</p>	<ol style="list-style-type: none"> <li>1. Appropriate and adequate resources.</li> <li>2. Resources for job performance are never adequate, but understand constraints (financial, equity).</li> <li>3. Center provided only one computer for the raion office. All other equipment and facilities had to be obtained locally.</li> <li>4. Resources are adequate.</li> <li>5. Information is available from different sources, but have to search for it on own.</li> <li>6. Given "wish" list to Project Coordinator - copy machine, camera, tape recorder, etc.</li> <li>7. Consultants need office space, computer, telephone, secretary, and other equipment at University. This will create a positive identity and a place to work and share ideas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Resources are sufficient for current scope of work, but more resources will be needed as the scope expands. ISS database is valuable and growing. Soils lab when functioning will be a great asset.</li> <li>2. Need a feed analysis laboratory.</li> <li>3. Resources are adequate and distributed to raions according to need.</li> <li>4. Regional supervisors need an office in the Project building.</li> </ol>
<p>2. Center faculty possess skills, knowledge, and abilities to perform the job.</p>	<ol style="list-style-type: none"> <li>1. Consultants are the right fit for their job.</li> <li>2. Consulting is a new role for the teaching faculty. They need skills to work with people. They need to be able to "close" a consulting visit with the appropriate problem solutions.</li> <li>3. I have both technical and communication skills needed in a raion faculty.</li> <li>4. As a raion faculty, I feel I have needed skills. I also know I can go to the University specialists for answers I don't have.</li> <li>5. I need computer skills, and how to learn on my own.</li> <li>6. Variable skills and knowledge among faculty. Also differing motivations, some older raion faculty may be less enthusiastic.</li> </ol>	<ol style="list-style-type: none"> <li>1. Faculty competencies vary as in any organization. But we have the best faculty from the University on the Center's team.</li> <li>2. Faculty have the necessary job skills. They are "right" for their jobs.</li> <li>3. Raion faculty have the necessary technical skills and are motivated. They need training in programming and communicating with farmers.</li> </ol>

**Table 3 (cont'd): Capacity**

Question	Faculty/Individual	Administration/Organizational
<p>3. Expectations of supervisors regarding faculty workload, time, and job performance.</p>	<ol style="list-style-type: none"> <li>1. Sometimes, management's expectation of required work exceeds the individual's capacity to meet due to physical and technical constraints, e.g., a slow and older style computer that cannot perform needed functions.</li> <li>2. Management expects consultants to write articles for farmers' library, newspaper; consult with farmers; work in different areas-youth, cooperatives; contact other organizations; write reports; solicit farmer feedback.</li> <li>3. Management has high expectations regarding rapid response to farmers' problems, questions.</li> <li>4. Expectations are reasonable.</li> </ol>	<ol style="list-style-type: none"> <li>1. Management's expectations of raion faculty-information providers, consulting assistance, situation analysis, future directions, training, seminars, be sensitive to problems, use advisory committees, be proactive and reactive, enlist volunteer support for programs, involve youth in programs.</li> <li>2. Workload of raion faculty is appropriate. All farmers do not have telephones; so faculty have to visit them on a selective basis.</li> <li>3. Regional supervisors have maximum workload.</li> <li>4. Problems in balancing the workload and time requirements of consultants are solved through substitutions for teaching and outreach.</li> <li>5. Expected that raion faculty will manage their time properly, submit a weekly itinerary, spend 4 days in the week visiting farmers.</li> </ol>

Performance Variable: Motivation

The organizational level question is: Do the policies, culture, and reward systems support the desired performance? The individual level question is: Does the individual want to perform no matter what?

Statements selected from the responses of the administration and faculty groups to four items related to this variable are presented in Table 4 and discussed below.

*Feedback on job performance.* Faculty indicated receiving supervisory feedback, both positive and negative. Some of the feedback was informal and some formal. Administrators also indicated a system was in place for receiving and giving feedback. Feedback could be informal with supervisors providing program assistance.

*Faculty recognition and reward system.* Faculty felt that recognition and reward for work was the personal satisfaction of a job well done. Extrinsic rewards were mostly verbal and informal. Administrators agreed with faculty on this matter, suggesting that a comprehensive system linked to performance needs to be developed.

*Faculty satisfaction with work.* Generally, faculty and administration felt that faculty were satisfied with their performance, but considered some dissatisfaction to be good for improving performance.

*Faculty motivation to do more when achieve job goals.* Faculty responses were in the affirmative.

Performance Variable: Expertise

The organizational level question is: Does the organization establish and maintain selection and training policies and resources? The individual level question is: Does the individual have the knowledge, skills, and experience to perform?

Statements selected from the responses of the administration and faculty groups to two items related to this variable are presented in Table 5 and discussed below.

*Assessment of faculty performance.* Faculty and administration indicated that a formal system to assess job performance should be developed. Currently, the only assessment is informal feedback from farmers and agents, and personal observation of raion faculty and University faculty.

*Effective training system in place for faculty.* There was general agreement among faculty and administration that a systematic system of faculty training, properly planned, conducted, and evaluated should be instituted. The need for ongoing training was pointed out, and specific training areas indicated.

**Table 4. Selected Statements of University/Center Faculty and Administration Regarding Motivation**

Question	Faculty/Individual	Administration/Organizational
1. Feedback on job performance.	1. I am generally praised, but I also need my work to be critiqued. 2. I receive feedback, particularly negative, when assigned work is not completed or delayed. 3. Mostly informal. Should have a more organized system of feedback from all relevant sources. 4. Receive feedback; however, additional work is generally demanded. 5. Some feedback, sometimes. 6. Get feedback from supervisors based on analysis of monthly reports and raion faculty suggestions. Usually it is critical of the work.	1. Feedback is in the form of program assistance by supervisors. 2. Mostly informal. 3. Used a raion faculty report as an example to show others. 4. Provide feedback to raion faculty on their performance, and receive feedback from my supervisor on my performance.

**Table 4 (cont'd): Motivation**

Question	Faculty/Individual	Administration/Organizational
<p>2. Faculty recognition and reward system.</p>	<ol style="list-style-type: none"> <li>1. Prefer extrinsic reward.</li> <li>2. System now is basically intrinsic.</li> <li>3. Recognition by supervisor is minimal, but the work itself is satisfying.</li> <li>4. Supervisors express verbal satisfaction. There is no specific material reward.</li> <li>5. My salary is reward in itself. I work for work's sake. Example: Contacted a farmer on a football field one Sunday because he was not available during the week.</li> <li>6. Verbal recognition.</li> <li>7. Need a differential reward system based on objective criteria, including farmers' performance/opinions, and faculty publishing record. This will serve as critique, counseling, and reward.</li> </ol>	<ol style="list-style-type: none"> <li>1. University reward system is not suitable for Center because it is based on classroom teaching. Need to develop a comprehensive system that is objective and fair, and linked to performance.</li> <li>2. Faculty generally prefer extrinsic rewards, but some individuals value the intrinsic reward of the work itself.</li> <li>3. Recognize and praise raion faculty for their work.</li> <li>4. Critique and counsel raion faculty positively. Their reward is personal and intrinsic, because they are committed and motivated.</li> <li>5. Recognize individual raion faculty for exemplary work at monthly meetings.</li> <li>6. Institute annual program excellence awards for outstanding raion/University faculty performance.</li> </ol>
<p>3. Faculty satisfaction with work.</p>	<ol style="list-style-type: none"> <li>1. One cannot be completely satisfied with one's performance, because further progress would not be made.</li> <li>2. I am satisfied with my output but want to do more.</li> <li>3. I have found myself in this job.</li> </ol>	<ol style="list-style-type: none"> <li>1. Generally satisfied. Some dissatisfaction is incentive to improve.</li> </ol>
<p>4. Faculty motivation to do more when achieve job goals.</p>	<ol style="list-style-type: none"> <li>1. Goal achievement serves as motivation (4).</li> <li>2. This is the first job in my career in which the work has been interesting, useful, and uplifting, where I feel needed, and the reward is farmers' faith and confidence in my work and worth.</li> </ol>	

**Table 5. Selected Statements of University/Center Faculty and Administration  
Regarding Expertise**

<b>Question</b>	<b>Faculty/Individual</b>	<b>Administration/Organizational</b>
1. Assessment of faculty performance.	<ol style="list-style-type: none"> <li>1. Standards for job performance need to be developed.</li> <li>2. Job performance is measured by feedback from farmers and raion faculty on what was taught.</li> <li>3. Meet monthly and provide written reports to my supervisor for assessing my work and to make future plans.</li> <li>4. There is no formal system of performance appraisal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Performance appraisal system needs to be developed.</li> <li>2. Observes faculty at work in their raions, gets farmer's opinions about them, and forms judgements.</li> </ol>
2. Effective training program in place for Center faculty.	<ol style="list-style-type: none"> <li>1. Center's training programs are being evaluated, but a more systematic and objective system is needed. For example, raion faculty training was evaluated orally and changes/improvements discussed for future training.</li> <li>2. Advocate self-learning.</li> <li>3. Self and peer evaluation of training.</li> <li>4. There should be training for raion faculty every three months on important and timely topics.</li> <li>5. Continuous training of raion faculty is important. But they have to learn by themselves and as they work with farmers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training of Center faculty is essential and should be done on a continuing basis.</li> <li>2. Need a training system, including evaluation of the training and its effect on faculty and their subsequent performance.</li> <li>3. Need training on how to work with youth and farmers-psychological factors, interrelationships, communications skills.</li> <li>4. Continued staff training is a must.</li> <li>5. Staff training needs to be evaluated.</li> <li>6. Staff development is crucial.</li> <li>7. Consultants need training in process skills; regional supervisors need training in personnel management and program development.</li> <li>8. Need to evaluate training.</li> <li>9. Formal inservice in winter months. Informal consultation should occur on a continuing basis.</li> </ol>

**Conclusions**

**Strengths**

A review of the interview data and quarterly reports of the Center to date reveals the following strengths:

1. University faculty working for the Center have the necessary technical background and have shown strong commitment to the Center's mission and good motivation to perform assigned roles. Training in the U.S. enhanced their knowledge of and skills in extension work. It appears their zeal has not diminished.

2. Deployment of 13 raion faculty to cover the entire oblast beginning October 1 ensures that the Center has one-on-one personal contact with farmers and complements ongoing educational activities, such as seminars, workshops, demonstrations, and mass media programs. The Center's presence among farmers, studying their situations, planning educational programs, and helping individual farmers with the problems they face and the needs they have is perhaps the most significant aspect of the Center's work. What is important now and in the future is the impact that raion faculty will have on agricultural and community development in terms of their work with farmers and farm families.
3. Winning the trust and confidence of farmers is another significant accomplishment of the Center. Farmers come to the Project office in Vinnitsa and the several raion offices in increasingly growing numbers, as testified by raion faculty and Project staff, to ask for help and/or participate in educational activities. This could not have been said in the early stages of the Project.
4. The new organization structure of the Center, effective April 1, from all accounts of the faculty is a positive move, resulting in closer supervision of raion faculty in three districts and relieving University faculty of the administrative burden of supervising raion faculty which they had done since October 1. The new setup has the potential of better communication at all levels of the organization, although there appear to be problems in certain functions, such as raion faculty-University faculty communication.
5. The Information Support System designed and established by the World Laboratory, Ukraine Branch, is a tremendous resource for the faculty in their work with farmers. Evidence of its value and growing use was observed in speaking with farmers, Center and University faculty, and World Lab scientists, and examples of use in the raions.

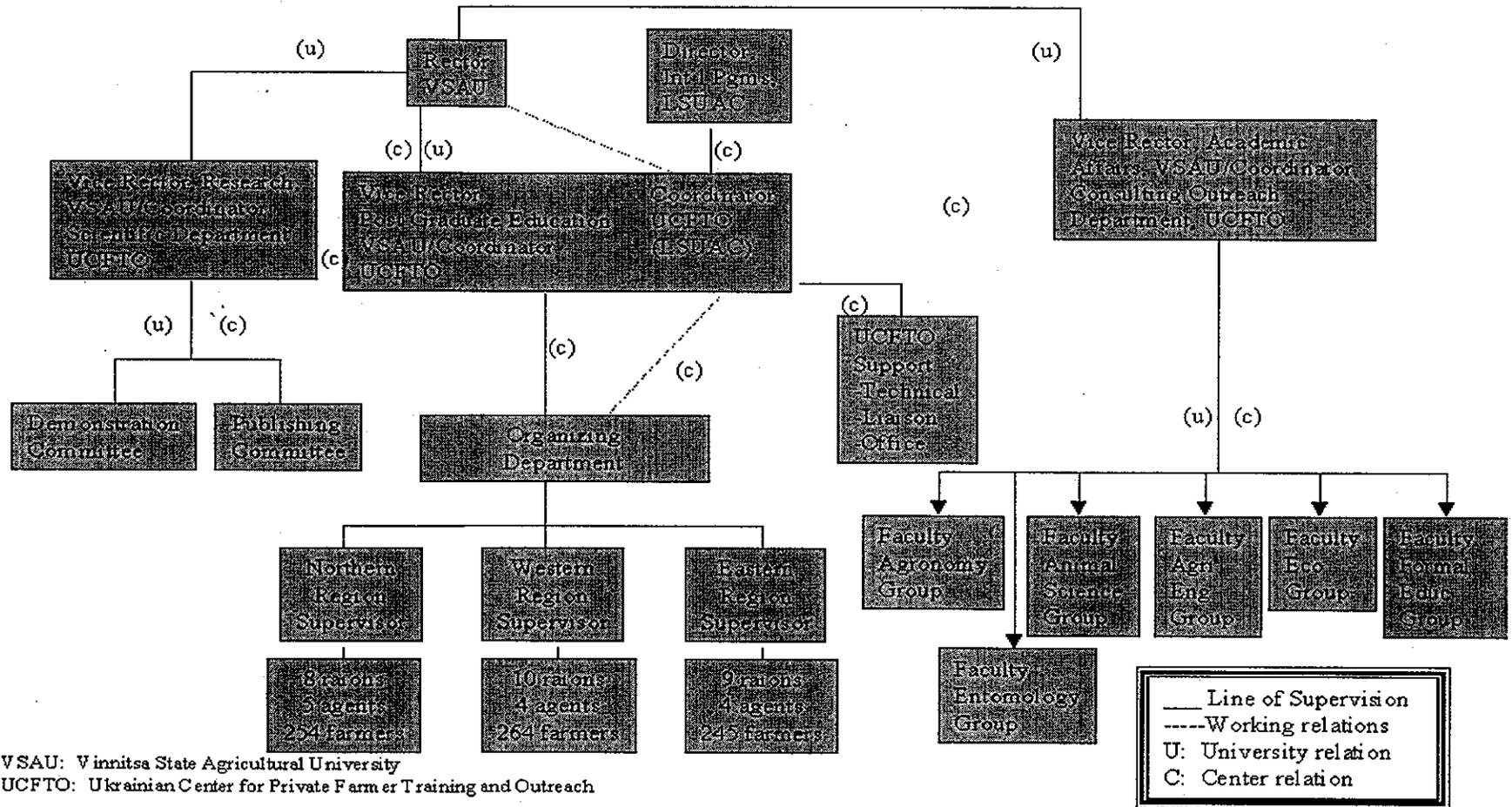
### **Performance Problems**

Problems either undermining performance or having a potential negative impact were uncovered in this study of the Center's internal operations. Some of these problems were mentioned in the interviews and/or sensed by the interviewer. Others were inferred from extended, informal discussion of specific issues with concerned faculty and the project coordinators. Presented below are broad categories of problems, their bases, and some specific examples.

#### Organizational structure and process

The reorganized structure (April 1, 2000) of the Center is shown in Figure 2. The structure is essentially hierarchical under the University Rector. University faculty are organized in two departments – Consulting Department with six subject matter groups and Scientific Department with two functions. Each department is supervised by a University vice rector. Subject matter groups and scientific functions do not have leaders. Raion faculty are organized into three regions, each region under a regional supervisor. Regional supervisors report to the Ukraine Project Coordinator. The U.S. Project Coordinator supervises the technical, external liaison, translation, and office staff of the Project.

Figure 2. Organizational Setup of the Ukrainian Center for Farmer Training and Outreach (April 1, 2000)



A Project Management Council chaired by the Rector includes the two project coordinators and is responsible for administrative and policy matters. A Center Administrative Council co-chaired by the Ukraine and U.S. project coordinators includes the two vice rectors and the three regional supervisors and is responsible for management, leadership, and coordination of the Center's operations. It was indicated that these councils had not met regularly and according to a set time table as they should have to oversee the administration of the Center, to plan programs and activities, and to make timely decisions on current and emerging issues.

There are no other formally organized standing committees. It is understood that ad hoc committees or task forces are established as needed to deal with specific issues, such as developing job descriptions or programming procedures.

One problem indicated in the organizational setup of the Center's functioning with regard to University faculty is their dual teaching and extension role which gives rise to such issues as overall workload, balance between teaching and extension responsibilities, schedule conflicts, and dual reporting to the University and Center.

University faculty were not clear about their future role, vis-à-vis teaching and extension, at the University after the Project is over. Occasionally, they had conflicts between their teaching schedules and extension assignments, largely because it was not possible to know in advance all possible outreach activities. In time, with more experience of extension programs, specialists should be able to better plan and adjust their schedules with teaching responsibilities.

A second problem concerns supervision, coordination, and support of the consulting function of University specialists.

As currently set up, University faculty serving as consultants in the subject matter groups are supervised by the Vice Rector for Academic Affairs. It was the general feeling of University faculty that delays of as much as 2-4 weeks in responding to raion faculty requests for technical assistance were due to problems in timely communication of such requests to concerned specialists. The main reasons for this situation were felt to be the administrative workload of the Vice Rector, and the use of the formal chain of command channel to communicate such requests, namely raion faculty to regional supervisor to project coordinator to consultants supervisor to consultant, instead of direct communication between the raion faculty and the consultant keeping appropriate supervisors informed for coordination purposes. Consultants felt that each subject-matter group should have a designated leader, and one of these leaders should be assigned the responsibility of administering the consulting function if this was acceptable to the Rector/Vice Rector. It should be mentioned that some administrators felt that the Vice Rector should continue to be in charge of consultants. Regarding the channel for communication between raion faculty and consultants, it was the unanimous view of raion faculty, consultants, district supervisors and most of the administrators that raion faculty and consultants should communicate directly on technical and program matters, keeping their respective supervisors informed of their activities and schedules.

All consultants interviewed and other consultants informally polled felt that an office should be provided at the University premises for consultants to come together, share, and work. This would not only establish an identity for the consulting function but also enable them to do their work more efficiently. The consultants' office would need appropriate equipment -- a computer and telephone at the minimum -- and a secretary to assist consultants, answer the telephone, and be available for other tasks of the Center.

The question of transport for consultants to travel to the Project Office in Vinnitsa and to raions to conduct outreach work was raised by a few faculty. It was felt that while they were expected to use their personal automobiles, the travel allowance rarely covered expenses. Also, increasingly consultants will

have to go in teams to conduct programs. Hence, a suitable means of transport should be made available for their use.

### Personnel Management Policies and Procedures

This is a major area of concern. Policies and procedures have not been drawn up with regard to the several processes necessary for effective management of Center personnel. It is possible that university policies and procedures are being followed. However, because the Center has an outreach function which requires different modes of operation than the traditional teaching function of the University it would appear that the Center's personnel policies and procedures should be identified and documented.

Except for job descriptions for raion and University faculty positions (Appendix 3), there was no written documentation found on recruitment and selection of personnel, orientation of new personnel to the job, staff development, supervisory channels and practices, employee performance appraisal, and promotion. Apparently, decisions in this regard have been made and actions taken by concerned individuals at different levels in the organization as needed. Without suitable guidance and criteria on which to base these decisions, the possibility that these decisions could be flawed exists. It is critical that the Center administration develop, document, disseminate, and implement policies and procedures for the following personnel processes and the specific items indicated for each process:

1. Recruitment and selection - job announcement, job criteria, evaluation process, probation period
2. Orientation to the job - job description (developed), performance appraisal, other technical and administrative matters
3. Staff development - identification of needed technical competencies and process skills, including leadership
4. Supervision - principles, guidelines
5. Promotion - criteria

### Programming Policies and Procedures

This is another major area of concern, although more progress has been made here than in personnel management matters. A program activities report form (Appendix 4) has been developed for monthly reporting of educational activities by raion and University faculty. Policies and guidance on the reporting procedure to be followed, however, were not written up. Policies and guidance were also not available for other critical programming processes, namely program planning, implementation, and evaluation. These processes include such tasks as use and functioning of advisory committees, development of situation analyses and statements, development of programs of work, plans of work and teaching plans, evaluation plans, and public relations (image building) plans.

### Decision Making

Administrative, personnel, and programming decisions in organizations should be governed by established policies and procedures. Absent such governance, the quality and legitimacy of decisions can be questioned, particularly on personnel matters. Since comprehensive written policies and procedures have not been developed it is entirely possible that decisions and the actions flowing from these decisions could cause dissent and negatively influence employee morale and their perception of management. In the interviews and during informal conversation with the faculty and Project staff, a sense of frustration and dissatisfaction came through on specific personnel hiring/termination decisions and program activities which were announced or conducted without prior consultation and/or involvement of relevant administrators and supervisors. Also, it was indicated that important decisions were often made

unilaterally (and whimsically) by senior management and communicated to the faculty and/or middle managers.

The farm demonstration program for the summer was also cited as an example of a flaw in the decision-making process. The demonstration committee's plan for farm demonstrations which was delayed and not drawn up until planting time included large-sized demonstrations (30 hectares each) at Illintsi and Verhivka colleges, instead of a series of strategic demonstrations in different raions as was originally intended and agreed to. The result of this decision is that institutions will benefit from the inputs provided by the Project, demonstration results will not be as widely disseminated, and farmers who attend field days at the colleges to observe the demonstrations are not likely to be convinced that they can replicate the results on their farms. These disadvantages of institutional demonstrations were the reason why Seaman Knapp over 100 years ago organized demonstrations on farmers' fields. It is understood that the number of demonstrations on farmers' fields this season will be less than half the number originally planned, and is a setback to this phase of the extension program.

### Communication

In any organization, an appropriate communication structure is critical. Formal, vertical lines of communication generally follow the chain of command. It is not uncommon for lateral communication across the hierarchy to be accepted for specific tasks and activities. Guidance may be specified for those interactions which require formal written communication, as well as interactions where oral communication is acceptable. Besides formal communication, a great deal of informal communication occurs in and out of the work place.

Generally speaking, the Center's communication system is in place. There is an infrastructure for internal communication, and the external communication system with farmers and the public is gradually being acquired and commissioned.

Formal communication follows the organizational hierarchy, and informal communication crisscrosses the organization.

In general, communication among faculty and Project staff in the Center is efficient and effective. It appears that interpersonal communication, faculty meetings, and contacts with farmers take place in an organized and systematic way. Project staff and faculty often work late hours to complete tasks and meet deadlines, and in the process contact and involve one another.

Even though communication systems may be in place in organizations, employees have constantly to work at overcoming communication barriers and breakdowns. The Center likely is not an exception.

### Workload and Workload Expectations of Faculty

Faculty generally thought their workload was reasonable. However, some faculty felt supervisory expectations of work output exceeded their capacity to deliver in a satisfactory manner. When this occurred, supervisors tended to be critical of their job output and performance, which could influence annual job performance ratings.

It was the general feeling of faculty and senior administrators that regional supervisors as a group are overburdened in terms of their teaching responsibility in the University and their work in the Center which includes both outreach consulting of farmers and supervision of raion faculty. Supervision is an important and time-consuming task which is being done by them in addition to their teaching and consulting tasks. They are not being compensated for this. Likewise, faculty with multi-raion

responsibilities are travelling longer distances to meet farmers and conduct educational programs as compared with faculty who work in one raion. They are not being compensated for the extra time and travel expenditure they incur.

### Job Mobility and Enrichment

Opportunities to move up in an organization, and to perform meaningful and satisfying tasks are incentives that an organization should provide its employees in the interest of overall job satisfaction. Obviously, the Center is still young and has been engaged in establishing and consolidating faculty in jobs at the University and raion level. Consequently, not much thought has been given to promotion and/or job enrichment opportunities. In the not-too-distant future, however, these aspects should be considered. For example, promotion tiers could be established for the university and raion level positions, and exceptional and qualified agents could be given the opportunity to become University specialists, and/or do cross-raion work assignments/projects for appropriate compensation.

### Salary and Compensation

Currently, the only distinction in faculty salaries is between University and raion faculty. The former are paid a higher monthly salary in recognition of their statewide responsibility and specialist expertise. It is logical that regional supervisors who have additional supervision responsibility should be paid more than University faculty. Also, thought should be given to providing merit raises, bonuses, and awards for superior performance. In addition, the level of monthly travel allowances should be examined in relation to the travel and work patterns of faculty. Norms should be established on the basis of this information and travel allocations made accordingly.

### Equipment and Facilities

Offices in raions have been established through local support of raion administrations and departments. Furniture and a telephone connection have been provided. Support for other equipment (copy, fax machine) and supplies is variable. The Center has provided each raion office with a computer which in some raions is a help to the local administration. It would appear that garnering more local support will be a continuous effort on the part of raion faculty and will be successful if it can be shown that outreach efforts are benefiting farmers and farm families in the raions.

A few University specialists indicated the need for University transport to travel to raions.

The Center lacks duplicating and printing facilities. These are essential to produce the materials needed to support the Center's educational programs.

### **Recommendations**

Based on the findings and conclusions of this investigation, the following recommendations are made to address the problems identified which should lead to improvement in the Center's performance.

### Documentation and Guidance

A serious drawback to faculty understanding and task accomplishment is the lack of documentation and guidance in several areas. It is recommended that the following documents be expeditiously produced.

1. A Personnel Management Guidebook describing policies and procedures on the following processes:
  - Recruitment
  - Selection
  - Orientation to the Job
  - Staff Development
  - Supervision
  - Promotion
  - Job Requirements and Incentives
  - Travel and Other Compensation
  
2. A Program Development Guidebook describing policies and procedures on the following processes:
  - The Extension Advisory Process
  - Situation Analysis
  - Program Planning
  - Planning Teaching
  - Program Evaluation
  - Public Relations
  
3. A Teaching Methods and Techniques Handbook describing the characteristics, advantages, and limitations of, and how to plan and integrate the following important methods and techniques into education programs:
  - Farm Visits
  - Group Meetings
  - Method Demonstrations
  - Result Demonstrations
  - Field Days
  - Circular Letters
  - Newsletters
  - Radio Broadcasts
  - Newspaper Stories

#### Curriculum Development

As the Center's education programs grow and spread in the oblast, it is important that these programs be supported by up-to-date technical information on various subjects.

The raion faculty will need help with curricula on various subjects that they will teach in their educational programs for farmers. Subject matter specialists at the university should take the lead in developing these curricula. Raion faculty should be involved in the curriculum development process because they can provide input on field problems and recommend practical solutions based on their experience in working with farmers. It is recommended that a curriculum development task force be formed to determine subjects on which curricula should be developed, assign responsibilities to University and raion faculty, establish timelines for the work, and monitor progress.

## Enhancing Human Performance

In the final analysis, Center faculty should have the expertise and motivation to perform to the best of their abilities if the Center's performance is to improve. To enhance performance of the Center's faculty, it is recommended that:

1. Job parameters be established specifying goals, tasks, workloads, and opportunities for growth.
2. Personnel and program decisions be made in a systematic manner based on input from concerned quarters/individuals and considering alternative options.
3. Barriers to open and lateral communication be removed.
4. Appropriate transport, equipment, resources, and facilities be provided to faculty to do their job.
5. Reward, recognition, and incentives be provided for superior performance.
6. Staff development opportunities be afforded to faculty
7. Personnel and program evaluations be used as counseling and motivation tools.

## Further Study Directions

This assessment was focused on internal operations of the Center. However, the Center's performance will be eventually judged by its impact on farmers and farm families. It is recommended that a study of the Center's impact be conducted in the summer 2001, as the Project draws to a close. It is recommended further that, at the same time, the internal operations of the Center be re-assessed to document progress in addressing performance problems which were uncovered in this evaluation. Both dimensions-internal effectiveness and external impact-will provide valuable information on the Project for USAID and the Government of Ukraine as the future of the Center and its place in a state/national extension system for Ukraine are considered.

### *Objective 2. Collaborate with assigned Center faculty to design the formal education curriculum.*

Two faculty designated to develop the formal education component, namely Natasha Fishchuk and Petro Saulyak, had visited LSU for two weeks in March 2000. During the visit, a two-year curriculum for technical subject-matter training of new private farmers which had been designed by them following their study tour in November 1999 was shared, discussed, and agreed upon (Appendix 5). A draft extension education curriculum to prepare extension personnel needed to staff the developing extension system in Ukraine was discussed and it was agreed that the Vinnitsa faculty upon return would work on the content of the curriculum and logistics of implementation prior to my visit. The faculty was also given information on administrative, academic, and procedural matters related to higher education and instruction followed at LSU, specifically in the College of Agriculture.

My assignment on the formal education component was to review and discuss with the faculty progress made on this component, and work on specifics of the extension education curriculum. Indicated below are two major action items agreed to, and the steps that were taken or that need to be taken to implement them:

### Establishment of the Formal Education Program

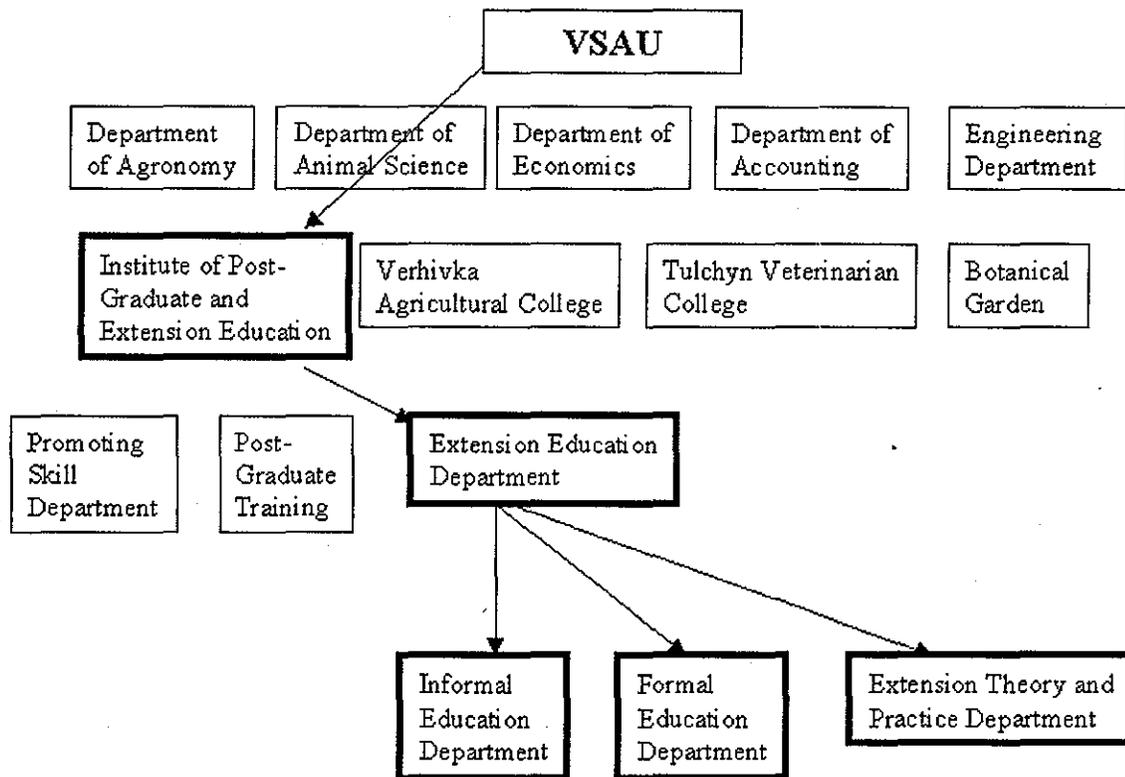
A key to the successful establishment of a sustainable formal education program at the Center focused on private farmers and extension education in support of outreach efforts of the Center is that the program have a distinct, unique identity. Discussion with the faculty and administration on how such an identify could be established within the organizational structure of the University and the Center led to the following concrete action.

A proposal was developed to create an "Institute of Post Graduate Education and Consulting Information" incorporating the existing post-graduate education department at VSAU and the new extension education function under the rubric of "Consulting Information". The proposal was approved by the University's Scientific Council, and the oblast administration. As per procedure, the oblast administration has written a letter to the Ministry of Agrarian Reform, requesting approval to the creation of the Institute. Approval is awaited.

I suggest that name of the Institute be changed to "Institute of Post Graduate and Extension Education". I realize that extension is not a commonly used and understood term for outreach education in Ukraine. I think, however, that in view of its widespread use in the world community adoption of the term "extension" along with an explanation of its meaning would lead in due course to understanding and acceptance, eventually becoming a part of the scientific/popular vocabulary. To support this argument, I contend that consulting has an elitist and economic connotation, while extension suggests a democratic, people-serving institution, with education as its primary mission.

The position of the Institute/Extension Department within VSAU, and the departments within the Extension Department are shown in the organization chart below (Figure 3).

**Figure 3. Institute of Post Graduate and Extension Education  
in the Organizational Setup of VSAU**



It was decided that responsibilities of the departments under the Extension Education Department would be as follows:

*Informal Education Department:* Planning and delivery of all outreach education programs in the raions and at the University in Vinnitsa and its associated agricultural colleges, including demonstrations, seminars, farmer contacts and visits, meetings, work with farmers associations and commodity groups, as well as the production and use of education materials needed to support the programs.

*Formal Education Department:* Implementation of the two-year technical post-graduate diploma program for new private farmers, including theoretical and practical training. The plan for this has been already developed.

To establish and implement this two-year diploma program, some important items for the Vinnitsa faculty to consider are development of the course outlines, preparation of course materials, identifying and gathering reference books and materials, scheduling of the start and implementation of the program, recruitment and selection of students, teaching responsibilities, evaluation of students' performance, and follow up of the training's utility.

*Extension Theory and Practice Department:* Planning and implementation of extension education curricula at the undergraduate and post-graduate levels of the University. Three curriculum levels were discussed and will be pursued for incorporation into the course structure of the University: (a) 50-60 hours of instruction (4 credit hours) in the "Foundations of Extension Education" to be included in all graduate courses (to be discussed with the Department of Education in the Ministry of Agrarian Reform); (b) 135 hours of instruction (8 credit hours) in "Extension Program Development" and "Extension Teaching Methods" to be included in all master's specialties at the University; and (c) a Master's Degree in Extension Education as per university requirements for course work and thesis research to train students for employment as extension faculty at University/Oblast and raion levels. Appendix 6 describes these curriculum levels in some detail.

In establishing and following through on the three levels of instruction, some important considerations include the logistics of development of courses, preparation of course materials, identifying and gathering reference books and materials, approval of course structure and course content, scheduling of the start and implementation of programs, recruitment and selection of students, teaching responsibilities, evaluation of students' performance, and follow up of students in employment.

It was agreed that the Vinnitsa faculty would take necessary steps to implement the technical diploma training in fall 2000, and seek necessary approvals and begin implementation of the extension education curricula as soon as possible. To assist the Vinnitsa faculty get started, I shall provide them with curriculum designs for the three levels, including course titles, descriptions, reference books and materials, and any relevant lecture materials/notes used by LSU extension education faculty.

### Team Teaching

The formal education component of the Project Plan includes team teaching of technical subject matter by LSU and VSAU faculty. During my visit, I discussed the team teaching concept with the Center's technical coordinators and the faculty to determine if technical instruction as planned, or an alternative use of the resources and expertise of the two institutions would be more appropriate and beneficial. The consensus appeared to be that the Vinnitsa faculty is well qualified to teach subject matter, but could be benefited by innovative, nontraditional teaching methodologies and techniques which would be useful to them in both classroom and outreach education settings. In my scope of work, I had included a seminar to the faculty on interactive teaching techniques as a complement to the traditional lecture. In the seminar

I used different interactive techniques – role playing, case study, and class debate – to engage the faculty. The full text of the seminar is at Appendix 7, and the set of exercises used to demonstrate the techniques is at Appendix 8. Ms. Wanda Yamkovenko conducted the exercise session in Ukrainian and provided to us (Mr Larry Brock and I) a gist of the interactions following each exercise, for possible reaction and follow-up. I believe the seminar, particularly participant involvement, reinforced the value of student involvement in learning especially in a non-formal environment. Based on this experience and discussions with faculty, it is recommended that the team teaching concept in the formal education component of the plan utilize LSU faculty who are proficient in interactive, nontraditional teaching. Experienced educators in the Cooperative Extension Service would be especially suitable in this role. These individuals should be utilized to teach and work with the Vinnitsa faculty in learning appropriate methods and techniques and developing materials to support interactive teaching. The focus should be on hands-on workshops in which Vinnitsa faculty can practice and perform in actual teaching situations, which may be videotaped, critiqued (both self and peer), and evaluated.

*Objective 3. Participate in the International Extension Conference, Kiev*

The International Extension Conference was held in Kiev, May 21-25, at the National Agrarian University of Ukraine (NAUU). The conference featured speakers from Europe and the United States addressing the theme "Characteristics of Extension Systems in the World and their use as Models in the Developing Countries". Over 100 delegates from 20 countries attended.

Extension systems and experiences in several European countries and the United States were described on the first day by a number of presenters. My presentation to the conference, entitled "A Perspective of Extension Worldwide: Trends and Issues", compared extension systems in the public (Government and University-based), private, and NGO sectors, sectoral combinations, emerging systems in Europe, and paradigms for the future. I also described ways in which extension is financed, programming trends, and extension functions and emerging roles. The presentation concluded with a discussion of significant issues facing extension, including the role of government in extension, accountability of public sector extension, and sustainability of extension in the new millenium. Appendix 9 contains the presentation.

On the second day various systems – private, donor-supported, university-based, government-funded - in Ukraine were highlighted.

A field trip to Vinnitsa on the third day enabled delegates to see the University and the work of the Center, including a crop demonstration of the Center at Illintsi Agricultural College.

The final morning of the conference began with an address by the Rector, National Agricultural University, summarizing the conference proceedings and asking delegates to review and ratify the conference recommendations which had been printed and included in the registration packet. It appears that anticipating the outcome of conferences in terms of recommendations is not an unusual practice although my experience has been otherwise, namely recommendations emerging as a result of the deliberative process which are discussed, finalized, and distributed usually at a later time among the participants. However, the recommendations made by the conference were general in nature and focused on (a) the importance of a national extension system for agricultural and economic development, (b) the need to create an appropriate extension system for Ukraine based on the country's unique characteristics, adapting existing extension models and drawing upon experiences of other countries, (c) providing information and education to the farming and rural population based on their needs and problems, (d) establishing a strong connection with applied, problem-solving research, (e) establishing an organizational structure that would provide a measure of autonomy, and (f) enlisting support from the government for an extension system serving the public good.

Once the recommendations of the conference were accepted by the delegates, there was a general discussion on what form an Ukrainian extension system should take. The pros and cons of various systems in vogue in other countries – government, university, private sector, NGO, farmers association – were presented by different speakers. Toward the end of the conference, it was suggested that a work group be constituted and charged with the responsibility of reviewing existing systems around the world, and recommending a system for Ukraine. I was one of about 25 persons nominated to serve on the work group. The Conference Secretariat in NAUU was made responsible for developing the terms of reference and outlining steps the group would take to complete the task.

Upon return from the conference, I received a request from the Vice Rector, NAUU to prepare a proposal for the work group. Dr. Lakshman Velupillai, Director, International Programs, LSU Agricultural Center, received a similar request. We have submitted a joint proposal of the scope of work of this work group (Appendix 10).

#### *Additional Tasks*

The following additional tasks were done during the assignment at the request of the Rector and the U.S. Coordinator.

Prepared a seminar presentation “A Brief Perspective of Extension Worldwide” for a group of 22 young leaders in Vinnitsa who were undergoing leadership training at VSAU. Text of the seminar is at Appendix 11.

Visited the Academy of Agrarian and Engineering Science, Kyamanets-Podilsky, to meet the Rector and faculty and explore the feasibility of opening an affiliate branch of the Center at the Academy.

Discussed with Iowa State University Agrarian Policy Project (project staff and MOAR staff) the parameters and steps for designing a Ukrainian extension system. The Project has been asked by AID to prepare a proposal for consideration by the Mission. Information was shared and further assistance offered as might be needed by the Project.

**Appendix 1**  
**Schedule of Activities**

### Schedule of Activities, May 20-June 10, 2000

- May 20: Arrival in Kiev, Meeting with administrators of National Agrarian University, VSAU, World Lab, and UCFTO coordinators.
- May 21: Registration for International Extension Conference, Kiev
- May 22-25: Participation in International Extension Conference, Kiev
- May 26: Visit vegetable farmers in Village Gorbanivka
- May 28: Meeting with Center Staff: Discussed legalization of Center, VSAU System legislation, project impact evaluation and documentation, continuation of project.
- May 29: Interviews of VSAU administrators (3)
- May 30: Faculty Seminar: Extension Around the World: Trends and Issues
- May 31: Interviews of University faculty (2)  
Visit Koziatyn Raion extension office and meeting with Mr. Gorbaniuk, Head, Koziatyn Raion Administration.
- June 1: Meeting with University faculty on formal education component.  
Visit Mogyliv-Podilsky Raion extension office, and farms of Mr. Anatoly and Mr. Dudnyk.
- June 2: Interviews of Ukraine Project Coordinator (1); University faculty (1)
- June 3: Preparation for seminar "A Perspective of Extension" to young agricultural leaders of Vinnitsa.
- June 4: Review of interview data and preparation for following week.
- June 5: Interviews of raion faculty (3) and regional supervisors (2)
- June 6: Meeting with Rector, Academy of Agrarian and Engineering Science, Kyamenets Podilsky.  
Visit Teplyk raion office and two farms-one private, one restructured collective.
- June 7: Scheduled presentation to young agricultural leaders of Vinnitsa "A Perspective of Extension" was cancelled.  
Faculty Seminar: Interactive Teaching Techniques.  
Meeting with University faculty on formal education component.  
Interview of regional supervisor (1)
- June 8: Visit to Academy of Agrarian and Engineering Science, Kyamenets Podilsky, to assess feasibility of opening an affiliate site of the Center.
- June 9: Visit to Ministry of Agrarian Reform and discussion with Iowa State University Agrarian Policy Team on a Ukraine Extension System.  
Interview of U.S. Project Coordinator (1)
- June 10: Departure from Kiev.

**Appendix 2**  
**Performance Diagnosis Instruments**

- 1. Interview Schedule, Administration/Organizational Level**
- 2. Interview Schedule, Faculty/Individual Level**

Performance Analysis of UCFTO  
May-June 2000  
Interview Schedule, VSAU/Center Administration  
Organizational Level

Performance Variable – Mission/Goals

1. Do all faculty under your supervision know the Center's mission/goals?
2. Do all faculty under your supervision know what is in the Center's strategic (work) plan?
3. Have the outcomes of the Center's work been clearly stated? (What are they?)
4. Has the Center identified what performance is expected from these outcomes?
5. Are current economic conditions, political climate, and cultural forces a barrier or a help in meeting the Center's mission/goals? (How?)
6. Do Center faculty understand what the goals of their jobs are, i.e., what they are expected to produce in their jobs, and the standards they have to meet? (What products, standards?)

Performance Variable – System Design

1. Is the Center's organizational structure appropriate? effective?
2. Are job functions relevant and appropriate to support the Center's mission/goals?
3. Are job responsibilities centralized? decentralized?
4. How is the work of the Center's faculty coordinated, both vertically and horizontally?
5. Is there sufficient flexibility in the Center's working? (For example?)
6. What kind of leadership and management practices do you follow?
7. Are the personnel and programming processes efficient and effective? (For example?)
8. Are resources for each process adequate?
9. Does the work of the Center have duplications of effort or gaps?

Performance Variable – Capacity

1. Are the Center's resources appropriately allocated, accessible to those who need them, and adequate for the job to be performed?
2. Do Center faculty have the authority to plan and implement programs?
3. Do Center faculty have the equipment, tools, materials and information to work efficiently and effectively?
4. Do Center faculty have the skills, knowledge, and abilities to do their jobs?
5. What expectations of workload, time, and job performance do you have for Center faculty under your supervision?

Performance Variable – Motivation

1. Do Center faculty receive feedback about how they are performing in their job? (For example?)
2. Are Center faculty rewarded and recognized for job performance?
3. What kinds of extrinsic and intrinsic rewards are given to faculty?
4. Are Center faculty generally satisfied with their work?
5. When Center faculty achieve job goals are they motivated to do more for the Center?

Performance Variable – Expertise

1. Does the Center have in place work (job) standards and criteria? (What are they?)
2. Is individual job performance being measured? (How?)
3. Does the Center have in place appropriate selection criteria? (What are they?)
4. Have effective training programs been designed and implemented for Center faculty?
5. Are the Center's training programs being evaluated? (How?)
6. Does the Center have adequate resources for staff development?
7. Are opportunities provided for Center faculty to continue to receive training to meet changing job needs? (For example?)

Performance Analysis of UCFTO  
May-June 2000  
Interview Schedule  
Faculty - Individual Level

Performance Variable – Mission/Goals

1. Do you know the Center's mission/goals?
2. Do you know what is in the Center's strategic (work) plan?
3. Do you know what the Center's stated outcomes are and what performance is expected from these outcomes?
4. Are current economic conditions, political climate, and cultural forces a barrier or a help in meeting the Center's mission/goals? (How?)
5. Do you understand what the goals of your job are, i.e., what you are expected to produce in your job, and what standards you have to observe?

Performance Variable – System Design

1. What is your opinion about the Center's organizational structure? Is it appropriate? effective?
2. Are your job functions (what you do) appropriate and relevant to support the Center's mission/goals?
3. Is your job responsibility centralized or decentralized?
4. How is the work you do coordinated (vertically and horizontally) with the work of other specialists in the raions and at the University?
5. Is there sufficient flexibility in your job? (For example?)
6. What kind of leadership and management practices are followed in the Center?
7. Are the programming and personnel processes efficient and effective? (For example?)
8. Do you have the resources for each process?
9. Does the work of the Center have duplications of effort or gaps?

Performance Variable – Capacity

1. Do you feel you have appropriate and adequate resources to do your job?
2. What independence do you have to plan and implement programs?
3. Do you feel you have the skills, knowledge, and ability to do your job?
4. Do you feel you have the equipment, tools, materials and information (inputs) to be efficient and effective?
5. What do your supervisors expect from you regarding (a) workload, (b) time required to do your job, and (c) job performance?

Performance Variable - Motivation

1. Do you receive feedback about how you are performing in your job? (For example?)
2. Are you recognized and rewarded for job performance? (How?)
3. What extrinsic and/or intrinsic rewards do you receive?
4. Are you satisfied with your performance?
5. When you achieve job goals are you motivated to do more for the Center?

Performance Variable – Expertise

1. What standards of performance does the Center have in place for your job?
2. Is your job performance being measured? (How?)
3. Have effective training programs been designed and implemented for Center staff?
4. Are the Center's training programs being evaluated? (How?)
5. Do you feel the Center has adequate resources for staff development?
6. Are opportunities provided for you to continue to receive training to meet changing job needs? (For example?)

**Appendix 3  
Job Descriptions**

## Job Description for raion agent of the UCFTO

Raion agent is an authorized representative of the UCFTO in raion.

1. Education: higher agricultural;
2. Work experience: not less than 1 year;
3. Responsibility to: directly responsible to a regional supervisor, appointed to the position by an order of the project leader;
4. Qualification: revealing some skills in working with people;

### Obligations:

1. Keeping constant contacts with raion farmers;
2. Conducting farmers surveys;
3. Organizing and working with advisory committees;
4. Designing and providing programs for farmers, private owners, their families, agricultural enterprises, youth, etc.
5. Systematically updating data base on the state of farms and farm operations;
6. Recording farmers' requests and finding ways of assisting;
7. Consulting new farmers in starting new farm enterprises;
8. Working with voluntaries;
9. Assisting in developing demonstration plots and farms, and organizing teaching programs for farmers on their sites;
10. Assisting in organization raion farmers associations, unions, cooperatives, farmers markets, etc.;
11. Developing monthly, quarterly and year plans for their activities;
12. Due reporting on the work done;
13. Keeping records and filing different documents of the agency;
14. Working with youth organizations and farmers' families;
15. Organizing farmers for participating at farmers' exhibitions;
16. Organizing seminars in the raions;
17. Cooperating with the representatives of different organizations, companies, firms, which assist farmers in farm operation;
18. Establish and conduct constant communication with the representatives of raion administration;
19. Ensuring covering in mass media activities of the Center;
20. Organizing library for farmers in the raion office and spreading information materials among farmers;
21. Improving personal educational level (participation in seminars, self-education);

### **Job Description for a consultant of UCFTO**

Responsible to: directly to the Leader of a consultant group.

Is appointed to the position by the Project Leader - Rector of the University.

#### **Responsibilities:**

- Developing teaching programs and plans for formal and informal education;
- Developing materials, handouts, and delivering lectures of the formal education courses;
- Updating materials and data base on the subject matter;
- Propagating "Extension" system among specialists of different levels;
- Assisting in forming cooperatives, credit unions, farmers markets, exhibitions, etc. (organizational work, preparing packages of necessary documents);
- Reporting on monthly basis on the work done;
- Participating in teaching programs for raion agents and keeping in touch with them;
- Collaboration with farmers associations and other organizations, institutions, which support farm operation;
- Consulting farmers in the form of letters and visits in response to their requests;

## Job Description for a member of demonstration committee of the UCFTO

### Responsibilities:

- assist project specialists in organizing and conducting demonstrations (big and small plots, demo farms);
- collect farmers' requests and prepare proposals to local and foreign companies, concerning use of their products as inputs for farm demonstrations;
- control of demonstration development;
- organize field days;
- evaluate demo results and submit a report;
- design advertising brochures about the results of the demonstrations;
- follow the instructions of the leader on implementing demonstration plans;

**Appendix 4**  
**Monthly Activity Report Forms**

## Report

**On the raion office activity for.....(month, year)**  
**(Is submitted by a raion specialist by the 5<sup>th</sup> each month)**

#	Programs, activities	Number of events/ Participants	Brief content of the activity	Results	Attachments
1.	Collecting farmers requests and information.				
2.	Bringing up farmers requests to the faculty				
3.	Obtaining information from the faculty				
4.	Providing farmers with necessary assistance				
5.	Organizing individual consultations for farmers.				
6.	Consulting:				
	- Farmers;				
	- HPO;				
	- New farmers (starting farmers);				
	- Women farmers;				
	- Farmers' wives;				
	- Other people, who owns property;				
7.	Visiting farms (not less than 16% of total number)				
8.	Visits with farmers in the office				
9.	Telephone calls: a) to farmers; b) answering farmers' calls.				
10.	Seminars;				
	- With farmers;				
	- Starting farmers;				
	- HPO;				
	- Young people;				
	- Farmers wives (home economic).				
11.	Organizing advisory committee meetings.				
12.	Organizing meetings with HPOs.				
13.	Participating in the farmers' association's meetings.				
14.	Meetings of the youth club "Young Farmers".				
15.	Organizing meetings of women association.				
16.	Assistance in creating:				
	a) Farm cooperatives;				
	b) Farmers stores, markets;				

17. Meetings with different organizations, supporting farm operation;
18. Meeting representatives of city administration.
19. Participation at raion board, responsible for issuing land certificates.
20. Initiating:
  - farmers credit unions;
  - exhibitions;
21. Participation in making education videos.
22. Determining who is the best farmer of the raion.
23. Organizing demonstration plots.
24. Organizing "Field Days".
25. Covering Center's activities in mass media.
26. Working with voluntaries.
27. Developing plans.
28. Organizing work schedules.
29. Submitting reports.
30. Further education.

**Report**

**On the work done by the faculty of the UCFTO.....(Name)**

**For.....(month, year)**

#	Date	Informational material, education programs (location, participants)	Name of the activity	Amount of work (pages, hours)	Signature of the regional supervisor, leader of the group, leader of the department, raion specialist
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**Appendix 5**  
**New Farmers Diploma Curriculum**

Louisiana State University  
Agricultural Center, USA

Vinnitsia State Agrarian  
University, Ukraine  
Culture, Kiev Branch

"World Laboratory", International  
International Center of Scientific

Ukrainian Center for Private Farmers Training and Outreach

Formal Education Curriculum

#	Name of the Course and discipline	Time (in hours)					Time for each discipline in sessions (hours)			
		total	class	among them			1	2	3	4
				lectures	practical	individual	17 days	20 days	20 days	20 days
<b>1. Extension Theory and Practice: 16 (24)</b>										
1	History of extension system development in the US, other models of advisory service	3	2	2		1	2(2+0)			
2	Agriculture and higher education in the US and Ukraine	3	2	2		1	2(2+0)			
3	Formal and informal education	3	2	2		1	2(2+0)			
4	Theory of changes	3	2	2		1	2(2+0)			
5	Science and production	3	2	2		1	2(2+0)			
6	Situational analysis	3	2	2		1	2(2+0)			
7	Advisory committee	3	2	2		1	2(2+0)			
8	Work with youth	3	2	2		1	2 (2+0)			
<b>2. Economical disciplines: 90 (138)</b>										
9	Basic Microeconomics	30	20	10	10	10	10(6+4)	10(6+4)		
10	Organization of agricultural enterprises	16	10	6	4	6	6(4+2)	4(2+2)		
11	Farm operation planning and forecasting	30	20	10	10	10	12(8+4)	8(2+6)		
12	Organization of agribusiness	30	20	10	10	10	10(6+4)	10(4+6)		
13	Analysis of production/commercial activity	16	10	6	4	6	6(4+2)	4(2+2)		
14	Rent relationships	16	10	6	4	6			6(4+2)	4(2+2)

3. Accounting and Finance: 74 (112)										
15	Farm accounting	30	20	10	10	10	12(8+4)	8(2+6)		
16	Taxes in agriculture	30	20	10	10	10	10(6+4)	10(4+6)		
17	Money and Credit	22	14	8	6	8		8(6+2)	6(2+4)	
18	Finance	30	20	10	10	10			10(6+4)	10(4+6)
4. Management: 56 (88)										
19	Management of agricultural enterprise	28	18	10	8	10	10(6+4)	8(2+6)		
20	Marketing of agricultural produce	22	14	8	6	8	8(6+2)	6(2+4)		
21	Board of Trade (Stock Exchange)	16	10	6	4	6			6(4+2)	4(2+2)
22	Communicative Psychology	22	14	8	6	8			8(6+2)	6(2+4)
5. Law of Ukraine: 70 (110)										
23	Civil Law	30	20	10	10	10	10(6+4)	10(4+6)		
24	Economic Law	16	10	6	4	6	6(4+2)	4(2+2)		
25	Cooperative Law	16	10	6	4	6		6(4+2)	4(2+2)	
26	Commercial Law	16	10	6	4	6			6(4+2)	4(2+2)
27	Financial Law	16	10	6	4	6			6(4+2)	4(2+2)
28	Arbitrage Law	16	10	6	4	6				10(6+4)
6. Modern Informational Technologies: 30 (46)										
29	Computer (operation)	46	30	6	24	16		20(4+16)	10(2+8)	
7. Technical subject matter: 200 (440)										
7.1 Agronomic crop production: 106 (166)										
30	Plant physiology	16	10	6	4	6	6(4+2)	4(2+2)		
31	Soil science and agrichemistry	18	12	6	6	6	8(6+2)	4(0+4)		
32	Plant production	16	10	6	4	6		6(4+2)	4(2+2)	
33	Basic principles of land cultivation	22	14	8	6	8			8(6+2)	6(2+4)
34	Crop production Planting	30	20	10	10	10			10(6+4)	10(4+6)
35	Feed production	16	10	6	4	6			4(2+2)	6(4+2)
36	Fruit production	16	10	6	4	6			4(2+2)	6(4+2)
37	Vegetable production	16	10	6	4	6			4(2+2)	6(4+2)
38	Technology of storage and processing	16	10	6	4	6				10(6+4)

7.2 Animal Science:114 (180)										
39	Physiology of agricultural animals	16	10	6	4	6	6(4+2)	4(2+2)		
40	Livestock growing and reproduction	30	20	10	10	10	8(6+2)	12(4+8)		
41	Feeding and feed production technology	16	10	6	4	6			6(4+2)	4(2+2)
42	Technology of cattle production	16	10	6	4	6			6(4+2)	4(2+2)
43	Technology of hog production	16	10	6	4	6			6(4+2)	4(2+2)
44	Technology of sheep production	12	8	4	4	4			4(2+2)	4(2+2)
45	Technology of poultry production	16	10	6	4	6			4(2+2)	6(4+2)
46	Horse production	10	6	4	2	4			4(2+2)	2(0+2)
47	Animal Hygiene	16	10	6	4	6			6(4+2)	4(2+2)
48	Basic Veterinary	16	10	6	4	6			6(4+2)	4(2+2)
49	Technology of agg. Product processing	16	10	6	4	6			6(4+2)	4(2+2)
7.3 Mechanization of Agricultural Production: 60 (94)										
50	Tractors and automobiles	30	20	10	10	10	10(6+4)	10(4+6)		
51	Agricultural machinery	16	10	6	4	6			4(2+2)	6(4+2)
52	Equipment for livestock facility	16	10	6	4	6			4(2+2)	6(4+2)
53	Use of agricultural machinery	16	10	6	4	6				10(6+4)
54	Storage and processing equipment	16	10	6	4	6				10(6+4)

Program duration - 2 years

Theoretical study - 11 weeks (616 hours)

Form of program - correspondence

Session classes - 8 hours/days (1-2 classes, 4-5 classes/day)

Signatures (Rector, Vice Rector, Deans.....)

**Appendix 6**  
**Extension Education Curriculum**

**Proposed Extension Education Curricula and Course Offerings**  
**Extension Theory and Practice Department**  
**Institute of Post Graduate and Extension Education**  
**Vinnitsa State Agricultural University**

**A. Objective:**

Prepare professionals for an extension career by providing graduate and post graduate students at Vinnitsa State Agricultural University with a theoretical base and practical experience in extension education.

**B. Rationale:**

1. Students at graduate level specializing in technical subjects should develop an understanding of the importance and value of extension in agricultural and rural development.
2. Students at the post graduate level should be able to specialize in extension education for the purpose of pursuing an extension career.
3. Trained extension career professionals will be committed to the philosophy of helping farmers and rural dwellers help themselves through learning and applying new technology.

**C. Curriculum Levels:**

1. Graduate Level. All students to take the following course.

Course: *Foundations of Extension Education* (4 cr. hr.): An overview of extension history, philosophy, principles, practices, and methods.

2. Post Graduate Level. Two options will be available, depending on students' interest.

Option 1: Minor in Extension Education (8 cr. hr.). To include the following courses as part of the master's programs in other subject matter specializations.

- *Extension Program Development* (4 cr. hr.): Principles of and practice in planning, implementing, and evaluating extension education programs in farm and community settings
- *Extension Teaching Methods* (4 cr. hr.): Understanding of non-formal education and application of teaching methods and techniques in conducting educational programs in farm and community settings.

Option 2: Master's Degree in Extension Education (30 cr. hrs. – 24 hr course work, 6 hr. research thesis)  
To prepare extension career professionals.

- *Extension Program Development* (4 cr. hr.): Principles of and practice in planning, implementing, and evaluating extension education programs in farm and community settings
- *Extension Teaching Methods* (4 cr. hr.): Understanding of non-formal education and application of teaching methods and techniques in conducting educational programs in farm and community settings.
- *Extension Communication* (4 cr. hr.): Understanding and application of the communication process, and essential communication and presentation strategies and skills in extension education programs.
- *Volunteer and Leadership Development* (4 cr. hr.): Organizing and managing groups, and understanding and applying basic principles of volunteerism and leadership in extension education programs.

- *Adult Learning-Teaching* (4 cr. hr.) Basics of adult learning, and designing and managing learning for non-traditional adult learners.
- *Youth Development* (4 cr. hr.) Understanding of youth developmental needs and organizing and managing youth-serving organizations.
- *Research Thesis* (6 cr. hr.): Conduct, report, and defend a research study on a problem of the student's choice in the discipline of extension education.

**Appendix 7**  
**Seminar: Interactive Teaching Techniques**

Ukraine Private Farmer Training and Outreach Center  
Vinnitsa State Agricultural University

**Interactive Teaching Techniques**

Satish Verma  
Head, Personnel and Organization Development  
Louisiana Cooperative Extension Service  
LSU Agricultural Center  
June 2000

**Introduction**

The classroom lecture for delivering subject-matter is a traditional method of teaching. It is teacher-centered, in that the teacher lectures and students listen, take notes, follow a textbook or class notes, and ask an occasional question. Interaction between the teacher and students, and among students, is minimal or non-existent.

Interactive teaching techniques can complement the lecture with obvious benefits to both teachers and students, and increase in overall learning effectiveness. The significant feature of these techniques is classroom interaction which involves and challenges students to reflect on what they are learning, and enables teachers to become creative classroom managers.

Regardless of whether lecture or interactive methods are used in the classroom, it is important to teach concepts. Research shows that a concept approach to learning enables students to understand, remember, and transfer what is learned to new situations better than rote or fact learning. This approach is effective in both lecture and interactive teaching modes. However, its effectiveness is greater when students are actively involved in learning and practice.

To illustrate, if one is teaching extension program development, major concepts such as planning, situation analysis, needs determination, program priorities, program objectives, teaching objectives, lesson planning, and evaluation will need to be covered. What the teacher should do is define each concept, give an example to help students understand, and ask students to use the concept in a practical situation with which they may be familiar or have experience.

For example, the concept need could be (a) defined as the difference between the current situation and the ideal situation, (b) illustrated by showing how to assess the extent of a problem or problems in a community based on what the existing situation is and comparing it to the desired situation, and (c) ask students to evaluate their own life or community situations to identify what their personal and community needs might be.

In the classroom, the concept approach is a useful tool to engage students in actively learning concepts and sharing their work with their peers.

**Interactive Teaching Techniques**

The following techniques will be discussed:

- Discussion
- Class Debates
- Demonstrations

Ukraine Private Farmer Training and Outreach Center  
Vinnitsa State Agricultural University

**Interactive Teaching Techniques**

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In the classroom, the concept approach is a useful tool to engage students in actively learning concepts and sharing their work with their peers.

**Interactive Teaching Techniques**

The following techniques will be discussed:

- Discussion
- Class Debates
- Demonstrations

- Case Study
- Role Playing
- Group Learning

## Discussion

In leading a class discussion, a teacher does two things: asks questions and gives responses. Skillful questioning by the teacher helps to focus the discussion and move it along. And, to respond effectively, the teacher has to listen carefully to what students say, encourage further participation, and maintain the dialogue.

Many students feel exposed or vulnerable when a question is asked. This may be out of fear of making a comment, expressing an opinion, or making a value judgment. Hence, it is good to start the discussion with a question that asks for facts or something simple.

Questions should be asked in a sequence. First are fact questions. These are low-risk, non-threatening questions, such as recalling specific information. For example, the names of improved wheat varieties, or a specific cultural practice, or what chemical is recommended for a particular insect pest. Second are questions that go beyond facts to look for relationships between ideas, facts, events. For example, compare extension approaches in America and Europe, or what happens when cows are fed growth hormones, or how is democracy different from communism. Third are "capstone" questions which challenge students to make personal judgments about ideas, events, facts. For example, how do you feel about market reform, or what is your position on the role of women in society, or what should the government do regarding agricultural subsidies and credit.

Teacher skills that will facilitate discussion include:

*Listening.* Give students at least 6-8 seconds to answer. Pull out questions from students' responses to continue the discussion.

*Refocusing.* To prevent the discussion from wandering, listen carefully and bring people back to the topic as soon as comments begin to drift.

*Clarifying.* Help students to express themselves clearly and specifically.

*Summarizing.* Pause during various times in the discussion, to pull together points made.

*Conceptual mapping.* Avoid quick answers to complex questions, first solutions to problems. Continue to probe and challenge students to think things through before they draw conclusions.

*Accepting.* Support students on their facts, opinions. Let peers clarify or correct other students. If this does not work, be diplomatic and caring in offering personal views.

*Substantiating.* Ask students to support their statement with logic, facts, reliable information.

The following are some useful points to consider in organizing a discussion:

Set goals of the discussion:

- Problem solving – reaching a common solution, examining views of others and self, developing consensus

- Developing a logical point of view
- Applying principles or generalizations
- Sharing learner expertise

#### Planning the discussion:

- Determine goal (from above)
- Establish method for beginning the discussion – intriguing question, shared experience, shared knowledge, statement of a problem

#### Facilitating the discussion

- Seat learners facing each other
- Redirect inappropriate behaviors
- Regularly summarize points made
- Draw discussion to a close

#### Evaluating the discussion

- What content was learned
- How did the process used work

### **Class Debates**

The classic two-person debate is inappropriate in the classroom. A class debate is a useful variation. This can be done by dividing the class into two teams on opposite sides of an issue, and having one person to serve as a critic to question the teams. Teams of four can debate an issue in a one-hour class period. The members of each team can speak on behalf of their position on the issue (pro or con), with the critic asking questions. Rebuttal or clarification of points is followed by the whole class voting on which team was more persuasive.

Debates are useful when (a) synthesis of ideas is important, (b) higher level learning outcomes are desired, and (c) there is a controversial issue.

The advantages of a debate are that learners are responsible for their views and learn at a higher level, and it is interesting for listeners.

The disadvantages of a debate are that listeners may be passive, teams may miss important points, opinions may predominate, one's personality and presentation may sway listeners one's way, a skilled moderator is required to lead the summary and discussion.

To prepare for a debate, select an appropriate topic, allow sufficient preparation time, and select team members who are compatible.

During the debate, allow each team member to present a position statement, alternate presentations for the two teams, allow time for rebuttal by each team, enforce the rules, and summarize.

### **Demonstrations**

Demonstrations combine showing and telling. They can be used to describe how something is done, how it works, how it is made, or how it is used. They can also be used to describe terms and processes.

An effective demonstration has three parts: (a) Introduction to motivate learners to watch and listen, (b) Body to tell how to do something and show how, along with why, and (c) Summary that emphasizes the main points or procedures, and allows for questions to be answered.

It is important that students be allowed to practice and show that they understand. By this they retain the information and/or skill, and are more attentive.

Questions teachers can ask themselves in planning demonstrations:

Is the demonstration an appropriate method for the subject or skill to be learned?

Prior to the demonstration did you:

See that the physical environment was comfortable?

Check to see that all learners could see and hear?

Collect all needed tools, materials, supplies, and visuals, ensure they were in good condition, and see that they are readily accessible?

Sequence the demonstration?

Practice the demonstration?

Check that you were appropriately dressed for the task?

In conducting demonstrations, do the following:

Introduction:

- Tell what you are going to demonstrate.
- Explain the demonstration's importance to the audience
- Point out how what is learned will fit in with what the audience knows.

Body

- Explain each step slowly and carefully
- Ask questions to be sure learners understand key points
- Keep only essential materials in the work space
- Talk to the audience
- Speak loudly so all can hear
- Be confident and at ease
- Avoid long silences

Summary

- Review key points
- Encourage questions
- Let learners practice

**The Case Study**

The case study uses a situation, event, or phenomenon to provide an opportunity for analysis and discussion of problems, options, and solutions. Case studies can be interesting for students because they can identify with characters and situations in a case, in contrast to textbook descriptions and lecture presentations.

Analysis of case studies usually leads to a decision. Steps in this process include:

- Identifying the problem
- Identifying all possible solutions to the problem
- Examining and weighing the consequences of each possible solution
- Deciding on the best solution

#### *Sample case*

*Ivan owns 50 hectares of good crop land. He raises winter wheat and tries to do this scientifically. He also raises vegetables for home use and for sale as fresh produce. Ivan wants to double the size of his wheat operation. He also wants to explore the possibility of processing vegetables so he can get a better price from processed vegetables compared to the fresh goods market. He is encouraged by the market reforms in the country, and hopes to capitalize on the opportunities that such reforms bring, ultimately increasing his income and providing a better life for his family.*

To increase his enterprise, Ivan will need credit to buy or lease an adjacent piece of land, and the equipment for processing vegetables. He recently received legal title to the land he owns, and is hopeful he will be able to receive credit on favorable terms.

*Ivan has a wife and four children. They help him on the farm – the wife keeps records and the children handle miscellaneous chores after school. He employs two seasonal laborers as required.*

Questions to analyze the case.

*Is additional information needed to do justice to the analysis of this case?*

*What should/can Ivan do to realize his goal?*

*What should/can his family do to help?*

#### **Role Playing**

Role playing is useful in helping students see things from the perspective of others. Careful planning is needed for success. The following are important planning steps:

- Identify the specific roles to be played.
- Prepare detailed descriptions of the roles that students will play.
- Develop a situation in which the roles (characters) will be played out.
- Allow time for students to become familiar with the parts they will play.
- Prepare key debriefing questions following the role playing exercise. For example, How realistic were the parts played? Were arguments logical? Could there be different reactions to situations than those portrayed? How did the role players feel while playing their roles? How did the class react to each player? What could be summarized from the exercise?

Advantages of role playing include:

- Can be motivating to students.
- New knowledge can be applied in a free-flowing situation.
- Interesting to observers and players.
- Personal opinions can be expressed.

- Fosters group cooperation.
- Develops initiative.

Disadvantages of role playing include:

- Learners may not participate fully.
- Players may be ineffective.
- Audience may inhibit the role play.

## Group Learning

Most adults seek a group learning experience. They like the social contact, and the chance to hear others and to test out their ideas in the group. Many techniques can be used in a group learning situation: brainstorming, case study, field trip, discussion, panel discussion, role playing, seminar, and workshop.

Groups, large or small, have people of the following types. Strategies for handling each type are indicated.

*The Aggressor.* Likes to heat up the discussion and fight. Do not contradict. Remain calm. Keep the person from monopolizing the discussion by not looking them in the eye and asking questions of others.

*The Receptive and Positive.* This is the hardest working person in a group; gives the most help in a discussion, is a good source of aid. Encourage this type to talk as many times as possible; make use of the individual's knowledge to contribute to the group.

*The Know-it-all.* Leave this type to the group. They will control.

*The Talker.* Interrupt this type tactfully and limit their talking time.

*The Timid.* Direct questions of interest to this type and make it easy to get answers. Try to build self-confidence. Ask for contribution when possible.

*The Negativist.* This type does not cooperate with or accept the ideas of others. Explore and recognize this type's ambition, knowledge, and experience to stimulate a change in attitude.

*The Disinterested.* *This type appears bored with what's going on. Direct questions to determine ideas and opinions about the topic and the trend of the discussion.*

*The Apathetic.* This is the openly indifferent type, who puts everything and everybody down, and who thinks nothing being discussed is important. Don't criticize, try to get them to participate. If non-responsive, ignore.

*The Persistent Questioner.* This type tries to get the leader's attention, ask distracting questions, and even upset the proceedings. Direct questions from this type to the group which will tend to control the person. Tactfully bring the discussion back on track pointing out that time is being wasted on tangential points.

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Prepared May 2000

**Appendix 8**  
**Exercises: Interactive Teaching Techniques**

Exercises for Interactive Teaching Techniques Seminar, UCFTO, June 2000  
Prepared by Satish Verma  
Conducted by Wanda Yamkovenko

**1. Debate.**

Topic "A Ukrainian Extension System should be based on a private sector model not a university and/or ministry based public sector model".

Format:

Moderator will take 2 minutes to introduce the topic

Two persons will speak for and two persons against the proposition. The members of each group will take turns.

Each person will have 3 minutes to present his/her argument, and 1 minute for rebuttal.

Moderator will have 4 minutes at the end for summary and a class vote on which side won the debate

Total time: 22 minutes

**2. Group Learning through Role Playing**

Objective: For a raion agricultural advisory committee to identify problems which will be addressed through extension education programs in the upcoming program year.

Format: Play following roles at an advisory committee meeting.

Raion agent – Committee chair and meeting moderator

Subject matter specialist – Technical expert

Raion administrator – Mr. Know-it-all

Small private farmer – Persistent questioner

Restructured collective farm manager – Aggressive

MOAP representative – Disinterested

A youth representative – Positive

A lending institution representative – Negativist

An HPO – Timid

Outcome desired: List of problems in order of priority

Total time: 30 minutes

**3. Case Study**

Objective: Analyze a sample case and discuss questions.

Sample case:

Ivan owns 50 hectares of good crop land. He raises winter wheat and tries to do this scientifically with advice from the raion agent. He also raises vegetables for home use and for sale as fresh produce. Ivan wants to double the size of his wheat operation. He also wants to explore the possibility of processing vegetables so he can get a better price for processed vegetables compared to the fresh produce market. He is encouraged by market reforms in Ukraine, and hopes to capitalize on the opportunities that such reforms bring, ultimately increasing his income and providing a better life for his family.

To expand his enterprise, Ivan will need credit to buy or lease adjacent properties, and the building and equipment for vegetable processing. He received legal title to the land he owns, and is hopeful he will get credit on favorable terms.

Ivan has a wife and four children. They help him on the farm – the wife keeps records and the children handle miscellaneous chores after school. He employs two seasonal laborers as required.

Questions to analyze the case.

Is additional information needed to analyze this case?

What can Ivan do to realize his goal?

What can his family do to help?

What barriers do they face?

What opportunities await them?

**Appendix 9**  
**Presentation: A Worldwide Perspective of Extension: Trends and Issues**

A Perspective of Extension Worldwide: Trends and Issues  
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## Abstract

The purpose is to provide an overview of the significant trends and issues in extension from a worldwide perspective. Public sector, private sector and NGO sector extension systems, sectoral combinations, emerging systems in Europe, and paradigms for the future are descriptive of organizing trends. Also described are ways in which extension is financed, programming trends, functions and emerging roles. Significant issues discussed are the role of government in extension, accountability of public sector extension, and sustainability of extension as an institution in the new millennium.

## Introduction

As extension enters the new millennium, a review of how extension systems across the world are evolving and adjusting to societal changes, and the significant issues they will face appears appropriate and timely. Relevant recent literature and the author's experience are the basis of this review. Admittedly, the review is neither comprehensive nor representative. Its purpose primarily is encourage dialogue on an important topic.

Extension as a worldwide approach to development, specifically in agriculture and food production, is found in different forms and roles. It is estimated that currently there are more than 700,000 extension workers. China and India together have more than one-half this number. In addition, China has over 500,000 technicians at the field level. A 1999 survey of 124 extension organizations in 82 countries indicated that a majority of the organizations were operated by the government, independently or in combination with a private group (87%), 8% were in the hands of non-government organizations (NGOs), and 5% were in the private sector, primarily Western Europe. In no country was government not subsidizing Extension in some way. Target groups were subsistence farmers in developing countries, and market producers in more developed countries.

The survey also showed that 75% of extension workers were field staff, and 25% are specialist staff (Kozari, 1999).

## Trends

### *Organizing Trends*

*Public Sector Extension.* Ever since it began as a public service in a formally organized manner in the early part of the 20<sup>th</sup> century, extension has been a responsibility of the government in planning national development to improve living conditions and quality of life for citizens. As a result, extension services in many countries in Europe, Asia, Latin America, and Africa were started by and organized as an arm of the government, usually housed in a Ministry or Department of Agriculture. Typically, Extension was supported by public funds, and staffed with government extension workers in a hierarchical and bureaucratic structure for purposes of administration, supervision, and programming.

The U.S. land grant-based system, also supported by public funds and featuring an integrated research, teaching, and extension setup, is an exception to the Ministry-based system prevalent in the public sector. The integrated land-grant research-teaching-extension concept has been adapted in other countries as well. For example, in the 1960s, several U.S. land grant universities collaborated with the Government of India to fashion a number of statewide agricultural universities on the U.S. model (Read, 1974). Thirty years later, these universities continue to serve stakeholders and have made substantial contributions to agricultural development. In 1988, Beijing Agricultural University, China, established a 4-pillar system of teaching, scientific research, extension and new technology development which was integrated with technology transfer programs at the local level. Key elements to the success of this integrated approach were multi-disciplinary extension programming, rejuvenated extension personnel (capable, active, and informed), and the provision of needed financial support. The BAU approach has since been adopted by Hebei Agricultural University and other colleges and universities in China (Ou, Yonggong, Dehai, & Xiaoying, 1995).

Ministry-based extension systems have over the years been criticized for work inefficiencies, top-down decision-making, and programming along bureaucratic lines, a disconnect with research, and a general lack of effectiveness in bringing about desired improvements in agricultural production. By contrast, University-based extension, institutionally connected with agricultural research and education, as typified in the U.S., is recognized for greater efficiency and impact on agricultural productivity.

Falvey and Forno (1996) suggest that regardless of where extension resides in the public sector, i.e., a Ministry or University, and regardless of whether research, education, and extension in agriculture are institutionally separated or institutionally integrated, coordination, collaboration, and co-financing of these three functions are a prerequisite for efficient and effective operations.

*Private Sector Extension.* The 1960s and 70s saw the emergence of a private extension sector in response to economic, technological, and social demands. Agribusiness companies began to offer fee-based information and advice to farmers, in addition to agricultural inputs. The private extension sector has expanded significantly over the last four decades in Western Europe, Australia, and New Zealand, and some Latin American countries. In the U.S. as well, the private sector has gained ground, complementing university-based public sector extension. Besides agribusiness companies, independent, professionally trained consultants now provide a wide range of technical advice and services in agricultural production, management, and marketing. In fact, some developing countries view the private sector as a more viable and efficient alternative to the public sector for transferring agricultural technology.

Government policies that determine rules, regulations and parameters for private sector functioning have an impact on the private sector's role. For example, private companies can be encouraged to develop "proprietary" technologies, supported by the provision of inputs, and information and training in effective

use of these technologies. Commercial farmers can pay for these services. Small-scale, marginal farmers will have to continue to rely on public sector extension and NGOs for their information needs (Swanson, 2000).

*A recent study of contracting for extension services from around the world commissioned by the World Bank (Rivera and Zijp, 2000) revealed a variety of contractual arrangements. The most prevalent form of contract was a two-party, fee-based contract issued by governments, development projects, farmer organizations, individual farmers, and agribusinesses for services rendered by the other parties to the contracts. A few examples of multi-party contracts were also reported.*

*Non-Governmental Organization Extension.* Over the last two decades, non-governmental organizations (NGOs) have become important players in rural development. National governments have been transferring extension responsibilities to NGOs while international agencies prefer these institutions for community development projects. They tend to work better with marginal farmers, and are more efficiently managed than public extension systems. NGOs are infused with a "do good" ethic, use participatory and group extension approaches, relate to the rural poor, and use appropriate technology and local knowledge. Most NGOs are relatively small, horizontal structures with short communication lines. As such, they are more responsive, flexible, and effective than large public sector agencies in delivering services. NGOs lack the ability, though, to respond to more fundamental problems of rural poverty and broad technology transfer. Collaboration with public and private extension sectors can help NGOs to leverage resources to assist resource poor farmers (Swanson & Samy, 2000).

*Combinations of Public, Private and NGO Extension Systems.* Most countries have multi-form, pluralistic extension systems, i.e., a combination of the public, private and NGO-based extension approaches. van den Ban (1999) posited that extension may be (a) Ministry of Agriculture (MOA) delivered, (b) MOA financed and delivered, or (c) farmer-financed, and delivered by commercial companies and NGOs, and/or (d) combinations of these approaches. Some examples of these combinations include (a) Portugal, where an emerging rural development system characterized by decentralized programming, bottom-up initiatives, and demand-driven activities are replacing the worn-out and non-relevant agricultural extension organization (Cristovao, 1999), (b) Czech Republic, with a pluralistic agricultural advisory service comprising 136 legal entities, including the MOA, secondary agricultural schools, agricultural universities, private companies, and special interest commodity and community interest groups (Slavik & Miller, 1999), and (c) South Africa, where a three-prong approach of community development for subsistence farmers (by government), commodity assistance to small scale commercial agriculture (by government-commodity group joint ventures), and a self-managed and funded approach by large scale commercial interests with no government assistance is to be found (Donovan & Tucker, 1999).

*Emerging Extension Systems in the Transition Economies of Eastern and Central Europe.* In the 1990s, the newly independent states of Eastern and Central Europe have been in transition from centralized, controlled systems to market-driven economies. In these countries, extension-related developments include initiatives sponsored by and adapted from University-based and government-based systems. Some examples of these initiatives include:

1. A five-year Polish post-communist extension system developed in collaboration with Penn State University showed positive gains in human capital development, institutional, administrative and organizational efficiencies, and effectiveness of program management and delivery compared with the communist era system (Bahn and Evans, 1999). Poland is planning to enter the European Union and is making the necessary adjustments to qualify.

2. Ukraine is planning to establish a national agricultural advisory (extension) service. In a recent survey, University administrators, agriculture ministry officials, and farmers, agreed that an agricultural advisory service is needed to help private farmers improve their production and management skills, and legal and business acumen to cope with the emerging free market enterprise system (Tmanov, 2000). A Ukrainian Private Farmer Training and Outreach Center established in Vinnitsa Oblast (state) with USAID assistance has been successful in engaging private farmers and educating them on legal, technical, and economic issues (Verma & Velupillai, 1999). Miller and Acker (1999) report on a number of successful higher education linkages between Iowa State University and the National Agricultural University, Ukraine, including curricular, administrative and structural improvements, reduced communication barriers, and reform-minded leadership.
3. Uzbekistan (Asia) has initiated a Rural Business Advisory Service featuring “commercialized information delivery preceded by public subsidy” as a public sector restructuring strategy targeted at private farmers who were formerly collective farm employees (Rivera, 1998).
4. Albania has embarked on a restructuring of its ministry-based extension system, which includes strengthening central, regional, and district structures and programs, and collaborating with the private sector. For example, a fertilizer dealers association is training agricultural input dealers in the use of extension methodology as they work with farmer clients. This “demonstrates that the private sector involvement can be powerful, and its technology transfer role limited only by entrepreneurs’ understanding of the importance and value of extension methodology in their business” (Freeman III, Androulidakis, Bicoku & Sena, 1999).

*Paradigms of the Future.* One paradigm of the future is increasing privatization and decentralization. This is in response to the demands of agricultural modernization and global urbanization, the reduction of public sector services, the influence of market forces, and the criticisms of public sector national extension systems (Rivera, 1999). The paradigm forecasts (a) continued expansion in the privatization of extension involving private enterprise development, and (b) decentralization strategies in the public sector to enhance the role of sub-governments, encourage public-private power sharing or partnerships, and delegate public sector funding and delivery responsibilities to third parties. Examples of this paradigm shift include (a) sub-government enhancement in North Africa, the Middle East, Uganda, Colombia, and Mexico, and the historically decentralized systems in the U.S., India, Brazil, Canada, and Germany; (b) public-private sharing and partnerships in Latin America, Caribbean, South Korea, and Taiwan; (c) public sector delegation to parastatals in Francophone Africa, and to NGOs in Bolivia, Ecuador, and Peru; and (d) market orientation strategies in “Mercosur” consisting of the Common Market of the South countries, Argentina, Brazil, Paraguay, and Uruguay, private vouchers in Chile, and direct charge systems in vogue in Western European countries (Rivera, 1999).

Even though decentralization promotes pluralism and democratization of the public sector, it is not a panacea for all ills and inefficiencies. Rivera (2000) contends there is a strong role for “federalism”, or a national system, to alleviate poverty, mobilize local resources, and gain advantage from scale and management efficiencies. He advocates the need for a balance of interests – national-local, public, and private – and the reinvention of national extension systems which will have a uniform purpose, and protect all groups. Rivera predicts, “Whether attached to agriculture or health organizations or social agencies, Extension as a concept and mode of operation will grow in the future”.

A second paradigm suggested by Swanson and Samy (2000) is public, private, and NGO partnerships. Analyzing the comparative strengths of public, private, and non-governmental organizations, they argue for a long-term partnership among these sectors to better serve the needs of farmers in developing countries. They maintain that each sector has a distinct role in this development partnership. Public sector

extension appears best suited to undertake a wide range of extension programs dealing with natural resource management, crop and livestock management, farming systems, and other technical and management issues. Private sector firms for their part have access to research and development in other countries, and can provide farmers with superior technologies, and with information and educational programs to complement new technological products and services. NGOs are well suited to assist the rural poor through different types of social capital development programs. The authors maintain that a positive policy specifying an appropriate division of labor between public sector extension, private agribusiness firms and consultants, and NGOs should be articulated by government. This will ensure that the different partners can fill their complementary roles thus contributing to overall development.

### *Trends in Financing Extension*

Extension services in by the public sector are financed by government. Services provided by private firms are paid by individuals who contract for these services, or pay through an assessment fee. NGOs are generally supported by donor groups or voluntary contributions. van den Ban (1999) identifies the following ways of financing extension:

1. Government service, paid by taxpayers
2. Government service, paid by a levy on certain agricultural products
3. Commercial company selling inputs to farmers or buying their products, and providing extension service
4. Farmers' association which pays for extension from membership fees
5. Farmers' association subsidized by government
6. NGO financed by donations from citizens inside or outside the country and/or commercial companies
7. NGO financed by government subsidies (national or donor)
8. Consulting firm which charges a fee from farmers (customers)
9. Publishing firm which sells journals/other publications on agriculture to farmers

Because costs are incurred by providers and customers in contrast to the free delivery of extension services, van den Ban (1999) maintains that the ways in which extension is financed will have consequences for the flow of information, the management of knowledge, the choice of extension methods and target groups.

### *Programming Trends*

Four programming trends are significant:

1. Multi-discipline, systems, and integrated approaches to issues and problems are increasingly being advocated, tested, and established. The complexity of issues and problems, and the inadequacy of single-discipline, piecemeal, narrow approaches to resolve them are responsible for this trend.
2. There is a growing focus on participatory, bottoms-up initiatives as a reaction to the traditional top-down programming typical of public sector extension programs, in which bureaucratic structures and procedures governed the process and outcome.
3. Advances in communications technology – distance learning, computers, internet – are causing adjustments in the traditional individual and group methods of teaching.

4. Globalization of markets and information, and mutual interdependencies among countries are resulting in increased cross-cultural sensitivities in programs and projects between countries and institutions, in curriculum changes, and in institutional linkages.

### *Extension's Function and Emerging Knowledge Roles*

Ideally, extension should function as an educational agency, with service functions that support its educational role. In practice, particularly in developing countries where a ministry-based extension system prevails, it is not uncommon for extension personnel to undertake regulatory and inspection functions. In such cases, the credibility and effectiveness of the extension system tends to be compromised since farmers develop a negative perspective of extension. Also, when extension personnel are required to perform these duties, the main purpose of education and service is adversely affected.

The role of extension is being redefined. Zijp (1999) suggests that extension will have three main roles in the future – technology transfer, mobilizing and organizing farmers and communities, and building human capacity. In the technology transfer role, extension will have to continue to explain and demonstrate to farmers the efficacy of recommended practices and improved technology. The mobilizing and organizing role will involve getting target groups together focusing on issues that affect them. For example, the land care program in Australia involves organizing farmers around the issue of appropriate land use, including productivity and conservation; in the Netherlands, the extension service started with organizing dairy farmers in a cooperative with the common goal of selling their produce. Increasingly, human capacity building through education and leadership development will be a vital role for extension. How and where the public and private sectors will best fit into performing these roles is an interesting question.

### **Issues in Extension**

#### **Role of Government in Extension.**

The debate on this issue is between public good and private benefit and the role of government in providing extension services. Bennett (1996) maintains that government should invest in agricultural extension when:

1. The public benefits more than individuals. For example, soil fertility education which impacts how owners and users care for the land and soil.
2. Government can do the job cheaper than private companies, which may not even have an interest in the work. For example, community development programs.
3. Development programs can be combined with extension programs. For example, irrigation projects which establish an infrastructure for extension to use in its programs.
4. Benefits and services will not be provided by the private sector. For example, integrated pest management and anti-poverty programs.

### *Accountability*

Accountability of public sector extension is a major issue worldwide, especially as resources becoming more scarce. Stakeholders are concerned about how public-supported funds are utilized and what benefits are accruing. Evaluation of programs in relation to costs and benefits is critical in making these assessments.

## *Sustainability*

It is the general consensus among extension scholars and practitioners that extension as an institution will survive in the new millennium. This is not the issue. Sustainability concerns relate to adjustments extension will need to make regarding audiences, programming, funding, and growth, and how it will respond to societal changes such as diversity, globalization, and advances in technology.

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**Appendix 10**  
**Proposed Scope of Work of Ukraine Extension System Working Group**

*Proposed Scope of Work of the Working Group on Development of an Extension System for Ukraine  
formed at the International Extension Conference, Kiev, May 2000*

Prepared by Dr. Lakshman Velupillai, Director, International Programs, Louisiana State University Agricultural Center, and Dr. Satish Verma, Head, Personnel and Organization Development, Louisiana Cooperative Extension Service, Louisiana State University Agricultural Center

## **Background**

An International Extension Conference focused on characteristics of extension systems around the world was held in Kiev, Ukraine, May 22-25, 2000. This conference was co-hosted by the National Agricultural University of Ukraine (NAUU) and the Vinnitsa State Agricultural University in Vinnitsa Oblast, Ukraine. Pennsylvania State University and the Louisiana State University Agricultural Center supported and participated in the conference program. Participants from the United States, Western and Eastern Europe, and other countries of the former Soviet Union presented their extension/outreach systems and experiences. At the conclusion of the conference, a working group of approximately 25 members from among the conference delegates was named to develop a proposal of an extension system for Ukraine for consideration by the Government of Ukraine.

Concurrently, the Ministry of Agrarian Reform, Government of Ukraine, is being reorganized with a coordinating section of the Ministry devoted to extension in Ukraine. At the same time, there is also in the Ministry a section that deals with all aspects of education in agriculture. These sections are currently headed by Vice Ministers. Which extension model is appropriate for the country is a topic of national debate at this time. Some groups favor the so-called European model of advisory services in which extension is under a ministry of agriculture set up separated administratively from education and research institutions, while others favor the so-called U.S. model in which extension is linked with research and education under the aegis of land grant universities. These issues were discussed at the conference and the above-mentioned working group was charged with the responsibility of studying the question of an appropriate system of extension for Ukraine, and developing a set of recommendations for consideration by the Government of Ukraine.

## **Scope of Work of the Extension Working Group**

The proposed scope of work outlines strategic steps to be taken by the National Agricultural University of Ukraine, co-sponsor of the conference and the lead institution in this effort, to move the working group toward its objective.

The first task should be to identify a Steering Committee from among the Working Group delegates to provide leadership and direction, and expeditiously and effectively address selected tasks. The Working Group would be involved in reviewing the work of the Steering Committee for suggestions and comments, and providing any other requested assistance.

It is suggested that the Steering Committee be composed of 8-10 members with knowledge and working experience of extension systems in the public, private, non-governmental organization (NGO), and farm sectors, both from within and outside Ukraine. The Committee should be chaired by faculty of NAUU, appropriate team members selected, and information gathering/writing assignments made. Institutions and interests that could be represented on the committee include:

National Agricultural University of Ukraine  
Vinnitsa State Agricultural University, Ukraine

Ministry of Agrarian Reform, Ukraine  
National Farmers Association, Ukraine  
Non Governmental Organization Sector, Ukraine  
Private Sector Extension, Ukraine  
U.S. Land Grant University  
A European Extension System (eg., Denmark, U.K.)  
International Development Agency – FAO, World Bank, or USAID

The work of the Steering Committee should be done in the following phases within the timelines suggested. The Working Group may be involved in reviewing the Phase 1 and Phase 2 documents and giving feedback. Electronic mail would be the primary means of communication.

*Phase 1. Background Study and Document Preparation (45 days)*

1. Study background information and prepare a working document describing extant extension systems in the world in terms of their characteristics, strengths, and limitations.
2. Describe the Ukrainian situation in terms of (a) rationale or justification of an extension system for Ukraine, (b) historical, socio-cultural, political, technological, and economic factors in the country which would influence the design of an extension system, (c) ongoing agricultural development initiatives and roles of Ukrainian institutions (universities, government ministries and departments, private industry, NGOs, farm groups) in the transformational economy of the country, and (d) current extension initiatives in the public, private, NGO, and farm sectors.
3. Guiding principles for creating an extension system for Ukraine in the new free market economy.

*Phase 2. Ukraine Extension System Design Draft (45 days)*

Based on the Phase 1 document, the Steering Committee with any needed input from others in the Working Group will develop a draft of the extension system design, including vision, mission, goals, scope, organization, staffing, funding, relationships, collaborations, and linkages. The roles and linkage mechanisms of vital research and teaching education functions, and relevant institutions/agencies in the country with the proposed extension system should be included in the draft design.

*Phase 3. Submission to Government of Ukraine and Potential Donors (30 days)*

The final design should be submitted through appropriate channels and accompanying protocols to the concerned departments/ministries/university systems in Ukraine, with recommendations for donor support. The possibility of a round table conference of concerned stakeholders co-organized by appropriate university and governmental interests should be explored to enlist support and legitimation for the proposed design.

**Appendix 11**  
**Seminar: A Brief Perspective of Extension**

A Brief Perspective on Extension  
Satish Verma

Presentation to young agricultural leaders of Ukraine  
Vinnitsa State Agricultural University and Ukraine Center for Private Farmers Training and Outreach  
June 6, 2000

What is Extension?

The term "Extension" was first used at Trinity College, England, in 1864 to signify "Extension of the University" (or a knowledge center), and consisted of lectures to women's associations and men's clubs. By the 1880s, it grew into an "Extension Movement". Extension became more important for the development of "agriculture, home economics and related areas" when "Cooperative Extension Work" was established as a legal entity in 1914 in the land grant colleges of the United States. These colleges were already doing classroom teaching and research.

Other terms for Extension in different countries have the same focus – influencing people to change through knowledge and information:

Voorlichting (Holland) and Penyuluhan (Malaysia) – lighting the pathway ahead to help people find the goal.

Beratung (Germany) – expert advice to people on best way to reach goal, but let them decide.

Erziehung (Germany) – education – teach people to solve problems themselves.

Forderung (Austria) – stimulating people to go in the right direction.

Vulgarisation (France) – simplify message for common man.

Capacitacion (Spain) – training to improve people's abilities.

As an educational institution, Extension links research with people. It brings the problems that people face in their lives and occupations (such as agriculture) to research scientists to find solutions. It then brings the solutions back to people in language they can understand to improve their life. This process of determining problems, finding solutions through research, and applying solutions to problems is the hallmark of Extension. Education is key to this process.

What is the role of Extension in agricultural development?

Agricultural development is vital for any nation's progress and growth. Without a sound agriculture providing food and fiber countries cannot prosper and grow. Scholars have said that Extension is an "accelerator" of agricultural development. Land, labor (management), and capital are basic inputs for agricultural production, but extension, through technology transfer and education of farmers, can boost the productivity of farms. Research has shown that the economic return to agricultural production from Extension is three times the investment made in it.

Why is Extension important for Ukraine and what kind of extension system should be designed?

Ukraine depends heavily on agriculture to feed its people and earn foreign exchange for importing goods and services it needs.

Transformation to a free market economy and privatization of the agricultural sector (land reform, restructuring of collectives, private farmers in the agricultural marketplace, credit availability and tax relief, etc.) are resulting in increased agricultural production and productivity, and a developing agri-support infrastructure.

A more favorable political and economic climate for agricultural development will support and encourage private farmers to expand and/or improve their farming operations, and become a vital part of the free market system.

Private farmers will need educational assistance from an extension system that will meet their needs in an efficient and effective manner. How such an Ukrainian system will take shape depends on a number of factors, including the country's cultural history and tradition, its administrative and bureaucratic philosophy, its research and higher education setup, and the makeup of the agricultural sector. The experiences, pros, and cons of different extension systems can be factored into the important decisions affecting the final design.

To encourage you to think about and discuss this important matter, I will briefly describe some basic ideas about extension in the form of questions.

How is Extension organized?

Extension around the world is organized in the public, private, and non-governmental organization (NGO) sectors. In most countries combinations of these sectors are found.

*Public Sector Extension.* Ever since it began as a public service in a formally organized manner in the early part of the 20<sup>th</sup> century, extension has been a responsibility of the government in planning national development to improve living conditions and quality of life for citizens. As a result, extension services in many countries in Europe, Asia, Latin America, and Africa were started by and organized as an arm of the government, usually housed in a Ministry or Department of Agriculture. Typically, Extension was supported by public funds, and staffed with government extension workers in a hierarchical and bureaucratic structure for purposes of administration, supervision, and programming.

The U.S. land grant-based system, also supported by public funds and featuring an integrated research, teaching, and extension setup, is an exception to the Ministry-based system prevalent in the public sector. The integrated land-grant research-teaching-extension concept has been adapted in other countries as well. For example, in the 1960s, several U.S. land grant universities collaborated with the Government of India to fashion a number of statewide agricultural universities on the U.S. model (Read, 1974). Thirty years later, these universities continue to serve stakeholders and have made substantial contributions to agricultural development. In 1988, Beijing Agricultural University, China, established a 4-pillar system of teaching, scientific research, extension and new technology development which was integrated with technology transfer programs at the local level. Key elements to the success of this integrated approach were multi-disciplinary extension programming, rejuvenated extension personnel (capable, active, and informed), and the provision of needed financial support. The BAU approach has since been adopted by Hebei Agricultural University and other colleges and universities in China (Ou, Dehai, & Xiaoying, 1995).

Ministry-based extension systems have over the years been criticized for work inefficiencies, top-down decision-making, and programming along bureaucratic lines, a disconnect with research, and a general lack of effectiveness in bringing about desired improvements in agricultural production. By contrast,

University-based extension, institutionally connected with agricultural research and education, as typified in the U.S., is recognized for greater efficiency and impact on agricultural productivity.

Falvey and Forno (1996) suggest that regardless of where extension resides in the public sector, i.e., a Ministry or University, and regardless of whether research, education, and extension in agriculture are institutionally separated or institutionally integrated, coordination, collaboration, and co-financing of these three functions are a prerequisite for efficient and effective operations.

*Private Sector Extension.* The 1960s and 70s saw the emergence of a private extension sector in response to economic, technological, and social demands. Agribusiness companies began to offer fee-based information and advice to farmers, in addition to agricultural inputs. The private extension sector has expanded significantly over the last four decades in Western Europe, Australia, and New Zealand, and some Latin American countries. In the U.S. as well, the private sector has gained ground, complementing university-based public sector extension. Besides agribusiness companies, independent, professionally trained consultants now provide a wide range of technical advice and services in agricultural production, management, and marketing. In fact, some developing countries view the private sector as a more viable and efficient alternative to public extension for transferring agricultural technology.

Government policies that determine rules, regulations and parameters for private sector functioning have an impact on the private sector's role. For example, private companies can be encouraged to develop "proprietary" technologies, supported by the provision of inputs, and information and training in effective use of these technologies. Commercial farmers can pay for these services. Small-scale, marginal farmers will have to continue to rely on public sector extension and NGOs for their information needs (Swanson, 2000).

*A recent study of contracting for extension services from around the world commissioned by the World Bank (Rivera and Zipp, 2000) revealed a variety of contractual arrangements. The most prevalent form of contract was a two-party, fee-based contract issued by governments, development projects, farmer organizations, individual farmers, and agribusinesses for services rendered by the other parties to the contracts. A few examples of multi-party contracts were also reported.*

*Non-Governmental Organization Extension.* Over the last two decades, non-governmental organizations (NGOs) have become important players in rural development. National governments have been transferring extension responsibilities to NGOs while international agencies prefer these institutions for community development projects. They tend to work better with marginal farmers, and are more efficiently managed than public extension systems. NGOs are infused with a "do good" ethic, use participatory and group extension approaches, relate to the rural poor, and use appropriate technology and local knowledge. Most NGOs are relatively small, horizontal structures with short communication lines. As such, they are more responsive, flexible, and effective than larger public sector agencies in delivering services. NGOs lack the ability, though, to respond to more fundamental problems of rural poverty and broad technology transfer. Collaboration with public and private extension sectors can help NGOs to leverage resources to assist resource poor farmers (Swanson & Samy, 2000).

*Combinations of Public, Private and NGO Extension Systems.* Most countries have multi-form, pluralistic extension systems, i.e., a combination of the public, private and NGO-based extension approaches. van den Ban (1999) states that extension may be (a) Ministry of Agriculture (MOA) delivered, (b) MOA financed and delivered, or (c) farmer-financed, and delivered by commercial companies and NGOs, and/or (d) combinations of these approaches. Two examples include (a) Czech Republic, with a pluralistic agricultural advisory service comprising 136 legal entities, including the MOA, secondary agricultural schools, agricultural universities, private companies, and special interest commodity and community interest groups (Slavik & Miller, 1999), and (c) South Africa, where a three-

prong approach of community development for subsistence farmers (by government), commodity assistance to small scale commercial agriculture (by government-commodity group joint ventures), and a self-managed and funded approach by large scale commercial interests with no government assistance is to be found (Donovan & Tucker, 1999).

What subject-matter areas do Extension programs cover?

When Extension began in the early 20<sup>th</sup> century, agriculture was the main focus. All nations were essentially agricultural and rural. As rural populations began to move to towns and cities other problems such as nutrition, health, consumer economics, and community improvement became important and began to be addressed. Today, Extension programs in developing countries that are still largely rural and agricultural, continue to concentrate on improving agricultural production, while industrialized nations with heavy urban concentrations, have a broader coverage of subject matter, i.e., agriculture and natural resources, family and consumer economics, and community development.

What audiences do Extension programs focus on?

Extension programs are directed toward all age groups. Adults, including the elderly, are a primary audience of Extension programs because of their contribution to economic growth and development, as heads of households, and as participants in community life. Equally important are youth who should develop life skills and build character so that they may contribute to the development of family and community life today while preparing to become tomorrow's leaders.

Other important audiences of Extension include agribusiness companies, private agricultural consultants and firms, environmental groups, community groups, adult and youth leaders, appointed and elected public officials, etc. They have a stake in development at different levels within a country and are a legitimate audience of extension education programs directed toward their specific needs and interests.

How is an Extension system set up?

Regardless of whether an Extension system is in the public, private or NGO sector, there are some key common elements:

A connection with people (farmers, families, youth, etc.) through an extension worker at the grass-roots or local level serving a strategic geographic area (group of villages, a local administrative unit, a raion or group of raions, etc.).

Extension workers organized in a hierarchy from the grass-roots level through successive managerial/supervisory layers, the number of layers depending on the size and scope of the system.

A strategically organized team of subject-matter specialists providing rapid-response technical support and in-service training to extension workers.

An advisory system to solicit input on problems, issues and needs from extension audiences as a basis for educational programming and programs.

A strong link with research institutions and scientists to ensure that practical, applied research is done on the problems of extension audiences.

What are the roles of extension workers?

Field-level extension workers have to be able teach adults and youth in their homes and communities, plan educational programs, manage these programs, collaborate with other agencies, mediate conflict, and evaluate if the programs are effective in improving the lives of their audiences.

Subject matter specialists are the experts in their discipline. They have to keep up with the latest research, translate scientific findings into easy-to-understand language, train field extension workers, and give technical assistance to them on problems in which they need help.

Extension supervisors and administrators should provide logistic support to their staff and program assistance as needed.

All categories of extension workers need good "people skills" and training in educational methodology to complement their technical knowledge. This combination will help them become effective extension workers.

In addition to teaching, extension workers of the future will have to be capable of organizing and mobilizing people, and developing community leaders to face complex issues and problems.

What teaching strategies or methods do extension workers use?

Extension teaching is informal. It is done in places where people live and work – in their homes, meeting halls, community facilities, farmers' fields, etc. Extension audiences are large and heterogeneous. They attend programs of their choice and free will. No grades for participation and performance can be given. These characteristics of extension teaching make the task of extension workers challenging and exciting.

Essentially, extension teaching takes place on an individual basis, in groups, or through mass methods. The mass media – television, radio, newspapers – reach a large number of people in a cost effective manner, and are useful in creating awareness of and interest in new ideas and practices. Group and individual methods are costlier and take more time of the extension worker, but are useful in building relationships and creating confidence with audiences, and are especially useful when they evaluate, try out or think of adopting new ideas and practices. New communications technology, including the internet, offers exciting possibilities for enhancing teaching and learning.

The extension worker has a wide range of methods to choose from - mass media, group meetings, farm visits, demonstrations, clinics, workshops, seminars, etc. Which methods to include in an educational program should take into consideration the objective of the program, and the unique characteristics, advantages, and limitations of each method.

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Attachment A-2.

### **New Structure of the Project**

Since April 1, 2000 Ukrainian Center for Private Farmer Training and Outreach began working on the basis of a new organizational structure, which includes except administrative personnel (coordinators, administrative secretary, translator, accountant, driver) three other basic units or departments:

1. Educational and consulting
2. Scientific
3. Organizational

General functions of these departments are:

Educational and consulting unit, led by Dr. Mamalyga, organizes and holds seminars and workshops, educational programs, consultations and other services for farmers. It comprises 5 groups of consultants: agronomists; animal scientists; economists; agricultural engineers; and formal education team.

Scientific department, under Dr. Petrychenko's leadership, plans and organizes demonstration plots, publicizes Center's activities in local mass media, publishes "Farmer Library" brochures, produces educational videos and prepares radio programs. Three committees of this unit (demonstration, publishing, and video) help to implement all the goals.

Organizational unit fulfills direct contact with agricultural producers, studies farmers' needs and secures an appropriate response to them. It includes three faculty, Drs. Nedbaliuk, Pryshliak, and Todosiychuk, who are responsible for the work of the raion offices, which are united into three groups, on the basis of their geographic location: northern, eastern, and western.

As the follow up of the structural modification of the Center, new reporting system was developed for raion offices and project faculty. It allows making better quality evaluation of the project work. Some data, for combined April and May are given below. They will describe main directions of Center's activity in numerical value.

- Registered farmers' requests		314
- Informational assistance to farmers		452
- Consultants' individual visits and advise		38
- Raion specialists' visit and advise to:		
Farmers		227
HPOs		149
People who are starting farms		34
Women farmers		8
Farmers' wiyes		4
Other private owners		3
- Visits to farms		284
- Visits of farmers to raion offices		352
- Telephone calls:	To farmers	599
	From farmers	336
- Seminars		4
- Total number of farmers attended		78

In addition, several activities for young people took place in several raion offices (three meetings of "Young Farmers" club were held at Illintsi College); talks and discussions with the representatives of the organizations which collaborate with farmers, and with the people working in governmental offices were arranged at the Center.

Our credit union "Farmers of Vinnychyna" was registered and legalized. Currently necessary procedures are being undertaken for opening bank account and making a seal.

Video committee, after a discussion with the faculty is preparing materials for producing the following educational videos:

1. Producing alfalfa seeds is a profitable business.
2. Long range processing equipment for agricultural products.
3. The use of pastures for cattle.
4. Keeping hogs in summer time.
5. Main procedures of getting and paying off loans.

Publishing committee published and gave to farmers in the oblast three brochures of "Farmer's Library" edition:

1. Growing potatoes on the farm and in the HPO's garden (V. Mazur).
2. Credit unions: their meaning and importance (N. Pravdiuk, L. Gutsalenko)
3. Form of farm accounting (N. Pravdiuk, L. Gutsalenko)

Newspaper "Budni", (edited by Oblast Growers Association), published many articles, written by the faculty:

1. Real assistance to farmers (V. Pryshliak)
2. Spring works for growing perennial grasses (V. Mamalyga)
3. Support for agricultural producer (G. Loyanych)
4. Credit Union as a form of financial cooperative (O. Kryvokon)
5. Information database (O. Kovtun)
6. Analysis of plant production (O. Tomchuk)
7. Mastitis of dairy cattle (O. Paladiychuk)
8. Labor accounting and paying salaries to farm labor (L. Gutsalenko).

In conclusion, it's necessary to mention important steps, which have been lately undertaken to include Extension system into University activity and structure:

1. The decision of the Scientific Council was made on creation within the University structure an Institute of Information and postgraduate Training.
2. Letters of request on creation this Institute were sent to local administration and Agrarian Ministry.
3. In response to this request the Ministry of Agrarian policy issued an approval of the order for creation an Institute of Information and Postgraduate Training, which includes the Department of Post Graduate Training with the Department of Extension Education.
4. According to the Scientific Council solution all University curriculums will include an Extension course on the undergraduate and graduate levels.

#### **Individual consulting assistance.**

Private agricultural producers are receiving regular consulting assistance from the Project to solve some practical problems related to agriculture activities. Farmers need information about agricultural inputs, marketing, cultural practices and other production related problems. The Ukrainian Center for Private Farmer Training and Outreach is providing such information at no charge and using a database and knowledge of agribusiness companies, assists producers with information about lowest cost and highest quality of agricultural inputs. When farmers request information about agricultural chemicals, the Center searches for formulating companies of this product and directly contacts them or their dealership in Ukraine. Information on sources, price, and quality are provided to the farmers.

#### **Examples:**

Farmer Dudnik Volodimir Andriyovich from Mogiliv-Podilsk was looking for 20 liters of insecticide "Zolon" and found it in "Agrohimcenter" company for 9.8 dollar per liter.

However, the center contacted "Aventis" company who is producing this chemical and found out that the price for one liter of "Zolon" is 8.3 dollars per liter. Farmer purchased insecticide from originator and saved 165 UAH.

Farmer Tsibulskiy Viktor Volodimirovich planned to purchase 7 liters of insecticide "Konfidor" (113 dollars per liter) at the company "Agrobusines", but Center found the same product at the company "Unona" for 13 dollars less and this farmer saved 500 UAH.

Also, the Center has strong cooperation with governmental structures such as Administrations and Agro-Industrial Complex on the Oblast and Rayon levels in providing all information about activities of the Project. From the governmental structures the Center is receiving information about new issued decrees, laws and changes regarding legislation related to the agriculture sector. This information is distributed through the field offices of the Project to the private farmers helping them to be familiar with new agricultural reforms. For example, based on the new decree □ 340 from February 17, 2000 "About mechanism for supplying of mineral fertilizers for agricultural producers in year 2000" from Cabinet of Ministry of Ukraine, each oblast received 2000 ton of ammonia saltpeter made available to farmers at the price of 380 UAH per ton. Ukrainian chemical factories released the same product with the price of 460 UAH per ton. Immediately after the new decree DAK "Khib of Ukraine" purchased 1000 ton. of saltpeter and another 1000 tons was purchased by former collective farms. Through the Oblast Administration the Center arranged to return some amount of ammonia from DAK "Khib of Ukraine" and helped farmers Kaduk Mehailo Petrovich (farm "Sokil", Tulchin rayon"), Lavrichenko Anatoliy Petrovich, Flora Andriy Arsentiovich (farm "Agrokor", Krizopol rayon), Barabash Vasil Petrovich and farm "Gasiaka", Krizopol rayon to buy 117 ton. of this fertilizer with the discount. This assistance by the Center helped farmers to save about 11700 UAH.



## MINISTRY OF AGRARIAN POLICY

## O R D E R

N 126 from July 14, 2000  
Kiyv

For the establishment of Institute on  
Post-Graduate Education and Consultative  
Information Support for Agricultural Producers  
at Vinnitsa State Agrarian University

With objective of fulfilling directives announced by Presidential Decree from December 3, 1999 №1529/29 "Urgent measures to quicken reforms in economic sector of agriculture", according to the ORDER of Cabinet of Ministries of Ukraine from September 5, 1996 № 1074 "About approval for the ORDER for Government Institutions of Higher Education", including the need to prepare specialists for advisory service for agricultural producers and request from Vinnitsa Oblast Administration and Vinnitsa State Agrarian University ORDERING THE FOLLOWING:

1. Establish on the base of the Department of Post-Graduate Education and Ukrainian Center for Private Farmer Training and Outreach the Institute on Post-Graduate Education and Consultative Information support for Agricultural Producers as the part of the University structure

2. For the Rector, Leonid P. Sereda of Vinnitsa State Agrarian University in one-month period:

2.1. To carry out the necessary changes to the statute and to appoint all assignments...

2.2. Develop and approve the ORDER on the Institute on Post-Graduate Education and Consultative Information Support for Agricultural Producers.

2.3. To establish of Institute within framework of the Budget given to the Agrarian University from the Government for the Post-Graduate Education on year 2000.

3. The Department of Staff Policy in Agricultural Education and Science (Mr. Melnick), Ukrainian United State Educational Institutions and the Educational Research Department "Ukrsilhozosvita" (Mr. Boresuk) to provide the support in organizing the work of the Institute on Post-Graduate Education and Consultative Information Support for Agricultural Producers at Vinnitsa State Agrarian University and to assist of its functioning.

4. Responsibility for carrying out the task is assigned to the Head of the Department of Staff Policy and Agracultural Education Mr. Melnick S.I.

Minister

I. Kirilenko

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## МІНІСТЕРСТВО АГРАРНОЇ ПОЛІТИКИ УКРАЇНИ

## НАКАЗ

№ 126 від 14.07.2000  
м.Київ

Про створення Інституту післядипломної освіти  
та консультативно-інформаційного забезпечення  
сільськогосподарських товаровиробників у Вінницькому  
агроуніверситеті

З метою реалізації завдань, визначених Указом Президента України від 03.12.99 р. № 1529/99 "Про невідкладні заходи щодо прискорення реформування аграрного сектора економіки", керуючись постановою Кабінету Міністрів України від 05.09.96 р. № 1074 (10/4-96-п) "Про затвердження Положення про державний вищий навчальний заклад", враховуючи гостру потребу у підготовці фахівців для порадних служб сільськогосподарського виробництва та клопотання Вінницької обласної державної адміністрації і Вінницького державного аграрного університету, НАКАЗУЮ:

1. Створити на базі факультету післядипломної освіти та Українського центру навчання та підтримки приватних фермерів Вінницького державного аграрного університету Інститут післядипломної освіти та консультативно-інформаційного забезпечення сільськогосподарських товаровиробників, як структурний підрозділ університету.

2. Фектору Вінницького державного аграрного університету Сероді Л.П. в місячний термін:

2.1. Внести відповідні зміни до Статуту та штатного розпису навчального закладу.

2.2. Розробити та затвердити Положення про Інститут післядипломної освіти та консультативно-інформаційного забезпечення сільськогосподарських товаровиробників.

2.3. Створення Інституту здійснити в межах загальних асигнувань, що виділяються агроуніверситету з Державного бюджету на післядипломну освіту у 2000 році.

3. Департаменту кадрової політики, аграрної освіти та науки (Мельник), Українському об'єднанню державних учбових закладів та їх навчально-дослідних підрозділів "Укрсільгоспосвіта" (Бориспіль, за зродом) надати допомогу в організації роботи Інституту післядипломної освіти та консультативно-інформаційного забезпечення сільськогосподарських товаровиробників Вінницького державного аграрного університету та здійснювати контроль за його діяльністю.

4. Контроль за виконанням наказу покласти на начальника Департаменту кадрової політики, аграрної освіти та науки Мельника С.І.

Міністр

І.Кириленко

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Attachment C.

**Lviv Seminar held by TACIS project.**

*On April 12-13, 2000 TACIS project FDUK 9601 "Post-privatization support to agriculture and an extension system" and Lviv agrarian advisory service held a joint seminar "How can you start advisory service in your oblast?"*

People from western parts of Ukraine, from Ivano-Frankivska, Volynska, Ternopilska, Zakarpatska, Rivnenska, and from Vinnytsia and Kyiv oblast attended this seminar. Most of them were representatives of oblast state administrations, and agricultural boards. Several faculty represented Rivno Agricultural College, and G. Loyanych, our project coordinator and Vice Rector of VSAU, attended on behalf of the UCFTO.

Main purpose of this seminar was to show people from all over Ukraine some of the experiences of Lviv Agrarian Advisory Service, its structure, work of the regional offices, etc. Presentations were made by Noel McCormack, the leader of TACIS project, Andrew Winter-Taylor, and Ion Houseman, experts of the project. Mr. Yury Kuharuk, Head of the Department of Coordination of the work of Advisory Services within the Ministry of Agrarian Policy, and Mr. Roman Schmidt, Deputy Minister of the Agrarian Policy and other representatives of Lviv Agrarian Advisory Service (LAAS) took part in the discussions.

LAAS in its structure comprises a central office and 5 regional departments. The central office is located in Lviv and employs administrative staff: director (Yury Kuharuk), counselor in animal science (Ivan Pankiv), counselor in accountant and taxes (Ulana Momont), public relations and information system specialist (Viktor Klymonchuk). Every regional office unites three raions in it. Two employees work in each regional office - animal scientist, and an agronomist. Every office has a computer and a vehicle at its disposal.

Lviv Agrarian Advisory Service carries out its activity in cooperation with educational and scientific research institutions: Lviv Agrarian University, Lviv State Academy of Veterinarian Medicine and Institute of Land Cultivation and Animal Biology.

Their main functions are:

- Support for central and regional offices;
- Providing specialized technical knowledge;
- Publishing and preparing TV and radio programs;
- Organizing educational programs;
- Cooperation with foreign experts;
- Directing research programs to full compliance with the agricultural producers' needs.

Main result of the LAAS activity during last year:

- 28 seminars and field days were held, with 460 people attended;
- 230 visits were paid to farmers' sites and telephone consultations were provided;
- 7 business plans were developed;
- System of accounting and record keeping was instilled and put into practice in 7 agricultural enterprises;
- 6 training programs in agricultural management (30 hours each) were organized and held with the total number of 112 participants, working at large agricultural enterprises.

LAAS is planning rural development programs. Thus, after implementing a pilot project they came up with the following results:

- Committee of rural development was created. It includes representatives of different social groups;
- Representatives of local administrations, who are in charge of social sphere, were involved in this work;

- The committee carried out several surveys and determined priorities;
- A kindergarten was created in one of the village schools;
- Groups of English language and Biological study were organized in several village schools;
- Exhibition of children's crafts in carpentry was held;
- Road constructing for a village was initiated and financially supported by the raion administration;

Our project representative used the opportunity to make a presentation about UCFTO activity in Vinnytsia oblast on the basis of VSAU. An announcement about International Conference in Kyiv was made and LAAS expressed a great interest in taking part in it.

Attachment D.

**A Report on International Conference "Agricultural Advisory Systems in the Countries of Central and Eastern Europe".**

The Conference in Hungary was held from May 14 till May 18, 2000 in Eger. Representatives of Hungary, Albania, Slovakia, Moldova, Rumania, Russia, Macedonia, Estonia, Croatia, Latvia, Bulgaria, Kyrghizstan, Poland, Holland took part in the conference. Dr. G. Loyanych and Mrs. Vanda Yamkovenko represented Ukraine, and Mr. Larry Brock represented the USA. Thus, the participants came from 16 countries of the world. Two representatives of FAO, Drs. Kalim Khamar and Jeffrey Adams played a leading role, alongside with the Hungarian host Dr. Josef Kozari. The latter emphasized in his presentation that 124 different systems of advisory service exist in the world today. 87% of them are financed by state.

In Hungary there are several different systems, providing advice and consultation assistance to agricultural producers:

1. Consulting informational centers were created on the basis of Agricultural Universities. They are financed from the state budget and provide farmers with free service. But they help only those farmers whose family income is less than 1 mln forint, and only on the group basis.
2. Every village has a counselor, who works as the employee of the Ministry. His role is to connect a farmer with the source of information. He/she studies farmer's operation, determines his profitability and recommends which private consultant to use.
3. Private advisory service.

Irfan Tageli (Albania) explained how the system was built in Albania. Seven coordinators, who are employed and assigned to work by a University, work as consultants for the whole country. One of the major components of a University activity is training consultants. State government pays for their work. There's a private

consulting company, which provides information and advice on getting loans. Because of the state budget deficit and financial shortage, it was decided to create a charity fund to pay for the work of the consultants.

Maria Koldechkova (Slovakia) reported that there is a Department of Education and Improving Qualification within the Ministry of Agriculture of Slovakia. Ministry employs 600 people, who work as consultants. This Agricultural Academy has got a course for training these consultants.

Myhailo Dymitrashko (Moldova) said that the system of advisory service is now being organized. They plan to implement this on three different levels:

- State
- Territorial
- Local

More than 700 specialists were trained and assigned to organize consulting centers.

Country reports showed different systems of advisory service in different countries in the process of creation, and development.

- Romania: National consulting Agency was created. They formed a special Department in the Ministry of agriculture, and consulting groups at the Agricultural Academy and in every research institute.
- Russia: consulting system is being created on the University basis, and within colleges on the raion level. About 80% of them are state institutions, and 20% - commercial.
- Estonia: private advisory service works in the country. It provides the advice only to those farmers who were registered.
- Poland: state advisory system was developed. It maintains contacts with universities, and is financed by state. Regional advisory offices have been started.

- Croatia: non-profit consulting system, financed by state. Local governments provide an office space.
- Latvia: first system in the country was created as state consulting system, financed by the government. But in 1997 it became private.
- Bulgaria: national system of agriculture was created, it also fulfills advisory functions, and is financed by the Government.
- Ukraine: "Ukrainian Center for Private Farmer Training and Outreach", which was created on the basis of Vinnytsia State Agrarian University was presented as the possible start for a national Ukrainian advisory system. Two project coordinators, Larry Brock and G. Loyanych, made a report on the achievements and problems of the Center.

The project coordinators studied experience of other countries of Eastern and Northern Europe in order to be able to make suggestions to our Ministry on creation of an agricultural advisory system for Ukraine. It was found that different systems of advisory service work side by side: created by the Ministries; on the university basis; independent governmental structures; private agencies. They are funded from state budget, donations make their own income, and charge farmers for service.

Attachment E.

**First International Conference in Ukraine on the Characteristics of Extension Systems in the World and their use as Models in the Developing Countries.**

On 22-26 of May 2000 the 1st international conference on extension systems in Ukraine was held at National Agrarian University in Kiev and Vinnitsa State Agrarian University. This conference was organized in memory of Dr. Donald E. Evans - Associate Professor of Ag. and Extension Education, Pennsylvania State University.

The major organizers of this conference were owners of private companies from Pennsylvania, Mr. Pishek and Ukrainian Woskobs family, Pennsylvania State University, Louisiana State University, Cabinet of Ministry of Ukraine, Ministry of Agrarian Policy, National Agrarian University, Vinnitsa State Agrarian University, International Center for Scientific Culture - "World Laboratory", Ukrainian Branch and Ukrainian Academy of Agrarian Science. The major purpose for organizing such a conference was to:

- Share experience encountered in development of Extension Systems.
- Explore possible modeling of established systems for use in developing countries.
- Study and develop proposals for establishment of an extension system for use in Ukraine's agricultural economy.

Approximately 250 representatives from different countries such as USA, Poland, Canada, Germany, Russia, Ukraine, United Kingdom, Austria, Latvia and Hungary participated at this conference. Official guest presenters included Dr. M. Gonzales, Under-Secretary of United States Department of Agriculture, Dr. Gladiy, Ukraine Vice-prime-minister and Dr. Kirelenko, Ukraine Minister of Agrarian Policy. During two days of the conference participants gave presentations concerning different systems of extension and shared experiences regarding adaptation of these models in developing countries. Ten speakers from different Projects (Louisiana State University, TASIC, DFID, Canadian agro-consulting Project) currently working in Ukraine extension and

farm advisory systems presented and shared their experiences and proposals for the future Ukrainian model.

After two days of presentation sections all participants had an opportunity to visit the Ukrainian Center for Private Farmer Training and Outreach in Vinnitsa Oblast (Louisiana State University, Project funded by USAID) and review a structure of a University based model. The conference group had an opportunity to visit a private cooperative farm, the Center at Vinnitsa State Agrarian University, our project's rayon office at Illintsiy agricultural college, and to meet with private farmers and discuss with them their opinion about Project results and activities.

At the final section all delegations expressed deep gratitude to the organizers and sponsors of this Conference. They expressed their own comments regarding a Ukrainian extension model and formed a working group for developing proposals for the National extension model which will be presented to the Ukrainian government. In addition, a working group collected all materials that was presented at the Conference and will publish them in Ukrainian and English languages.

Attachment F.

**Training for Ukrainian Extension Specialists  
in Curriculum Development  
April 5 - April 15, 2000**

**Wednesday, April 5, 2000**

8:05 pm Arrive Baton Rouge Metropolitan Airport

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

**Thursday, April 6, 2000**

268D Knapp Hall

11:00 am Pickup from Hotel

11:30 am **Bank**

12:00 noon Lunch

1:00 pm **Orientation** – Lakshman Velupillai and Brett Craig

2:00 pm **Discussion of Program** – Satish Verma and James Trott

4:00 pm Return to Hotel

**Friday, April 7, 2000**

268D Knapp Hall

9:00 am Pickup from Hotel

9:30 am **Present What You Have Developed** – Petro Saulyak and Nataliya Fishchuk

11:30 am Lunch

1:30 pm **Discussion on What You Expect to Achieve**

4:00 pm Return to Hotel

**Saturday, April 8, 2000**

Free Day

**Sunday, April 9, 2000**

Free Day

**Monday, April 10, 2000**

268D Knapp Hall

9:00 am Pickup at Hotel

9:30 am **Curriculum Development** – Satish Verma

11:30 am Lunch

1:30 pm **Assessment Techniques** – James Trott

4:00 pm Return to Hotel

**Tuesday, April 11, 2000**

268D Knapp Hall

9:00 am Pickup at Hotel

9:30 am **Certificate Development** – Fritz McCameron

11:30 am Lunch

1:30 pm **Non-traditional Teaching Techniques** – Satish Verma

4:00 pm Return to Hotel

Attachment G.

**Beef Cattle Production Training Program – Canadian Agency for International Development**

*Report of animal science consultant Vanzhula J. I. on the trip to the Major Selection Centre of Ukraine – Pereyaslav-Khmelnytsky, Kiev oblast, which took place from May 10- 30, 2000. The goal of the trip was to improve the qualification of workers in the field on beef cattle growing, feed production, and agricultural management.*

The training was organized by a joint project of Ukraine and Canada, which is aimed at the development of beef and forage industry with the assistance of Canadian Agency of International Development. The partners of this project are: Manitoba and Saskatchewan provinces, Saskatchewan Trade Expert Partnership (STEP), Ministry of the Agrarian Policy, UAAS, Major Selection Center in Pereyaslav-Hmelnytsk.

The training was based on the program, which was developed for three weeks of study, 6 workdays in each week. The main questions, which were discussed by Canadian and Ukrainian specialists went as follows:

- information about Canadian-Ukrainian project on beef cattle and feed production development;
- informational consulting services in the agriculture of Canada;
- training of adults, providing and propagating new technologies, planning in extension, extension system in Canada, alternative types of extension service in different countries;
- contemporary situation in animal science in Ukraine;
- problem, which can possibly be faced while organizing advisory service in agricultural sector of Ukraine;
- agricultural management in Canada, marketing in livestock production, basic management, importance of goal statement, decision making and its principles, cooperative organization of public pastures, business plan development, management of human resources;

- beef cattle production in Canada;
- characteristics of the profitable beef cattle farm in Canada and Ukraine;
- feed production in Canada, forage crops and their characteristics, organization and effective use of pastures, forage storage, feeding and determining feed quality, seed production, feeding crops production, pasture management, characteristics of feed production in Ukraine.

After listening to the aforementioned course of agricultural management, beef cattle and feed production, a great amount of additional information has been acquired, which may lead to the increase of the consultant's professional level. This information will be used for giving efficient advice while working with agricultural producers and for teaching future farmers.

Concerning extension issues raised at this program, it's important to point out the lack of appropriate information, lack of systematic presentation of answers, and poor clarity of delivery, if we take into consideration the fact, that most of the participants never heard anything about extension, its methods, structure, effectiveness, etc.

The presentation of the UCFTO project as an alternative form of extension service in Ukraine was commonly appreciated and accepted with understanding and interest of the course attendants. The participants of the program also felt compelled to learn more about the activity of UCFTO in Vynytsia oblast, and the leaders of the Canadian project, Mr. Louder and Ms. Lysianska gladly cooperate with our project.

After the end of the course final tests were taken in all the previously learned materials and a Certificate issued.

**Attachment H**

**Report of James E. Devillier, County Agent, East Feliciana Parish  
Louisiana Cooperative Extension Service, LSU Agricultural Center**

**On assignment to the  
Ukrainian Center for Private Farmer Training and Outreach Project**

**Vinnitsa, Ukraine**

**June 5-24, 2000**

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## Summary

Three weeks (June 5 to 24, 2000) were spent in the Vinnitsa, Ukraine studying, assessing and evaluating livestock educational programs and livestock production in selected raions.

The scope of work (SOW) involved farm visits, seminars on educational methodology for Vinnitsa State Agricultural Institute (VSAI) Extension faculty and travel to research units and livestock support institutions (Attachment 1).

Recommendations in this report are designed to further enhance the Extension presence in each raion. The SOW also called for an assessment of livestock genetics and feeding systems. The report lists recommendations for improvement in these areas.

In terms of livestock result demonstrations, raion specialists need to focus on five broad areas:

- a) improved livestock selection and breeding,
- b) improved livestock feeding regimens using standards similar to the US N.R.C.,
- c) a cycle of production that enhances profitability,
- d) improved use of livestock facilities,
- e) converting marginal grain producing land into pastures/forage producing areas.

To coincide with these factors, research and extension emphasis is needed in the broader context of:

- a) livestock marketing and market reporting
- b) feed/forage analysis and laboratories
- c) land use coupled with financing for livestock and other agricultural endeavors
- d) public policy on livestock sanitation/health with veterinary support
- e) relevance to production problems encountered by livestock producers

Outlined in the SOW were seminars to be delivered to the Extension faculty. The subject matter focused on conducting result demonstrations and conducting farm visits. Each seminar ended with a handout outline for planning farm result demonstrations and recording farm visits (Attachments 2, 3, 4, and 5). After the result demonstration seminar, faculty were assigned to a group and each group planned and reported on a result demonstration involving livestock production. A farm visit skit reinforced that educational program.

Attached as items 6 and 7 are the itinerary developed by the VSAI faculty and a daily activities report.

Finally, my deepest appreciation and thanks go to all in Vinnitsa, the faculty and personnel of the Ukrainian Center for Private Farmer Training and Outreach, their families, the farmers, the VSAI and all others, who extended their hand in friendship and welcome. My hope is for the success of this project and ultimately for the success of all the Ukrainian farmers, especially the livestock producers.

## Report

### Purpose

This assignment had as its purpose to evaluate, in cooperation with the Ukrainian animal scientists and extension specialists, the current status of animal production activities including educational programs in the Vinnitsa oblast with suggestions to future direction.

### Objectives

Four objectives were developed that would achieve this purpose.

1. Evaluate current animal science demonstrations, their overall design, direction and scope and suggest needed changes.
2. Determine the appropriateness of the animal science research base in regards to the relevance to farmers needs with suggested needed strategies and/or modifications.
3. Evaluate the current status of feeding livestock with suggestions to maximize the use of locally available feedstuffs.
4. Evaluate the current status of animal genetics with suggestions to improve the genetic potential of the livestock.

### Schedule of Activities

The assignment began in Vinnitsa on June 5, 2000 and ended in Kyiv on June 23, 2000. Activities included farm visits with livestock producers, interaction with faculty animal science specialists and field personnel and discussions with other livestock industry leaders, agency heads and other agriculture university researchers. Two seminars focusing on recognized Extension teaching methods were presented to project faculty, staff and agricultural students. One day was spent at the Kyiv Ag Expo 2000.

### Assessment

Recommendations and suggestions made in this report are based on observations made regarding the current livestock production situation in the Vinnitsa oblast and on recognized livestock production practices.

### Findings and Recommendations

**Objective 1 - *Evaluate current animal science demonstrations, their overall design, direction and scope and suggest needed changes.***

Livestock production units are basically managed under conditions which existed prior to

independence. In the Ukraine, it has been reported that since 1990, cattle production has declined over 40% while the decline in swine production exceeds 50%. Physical resources of the livestock producers visited are under utilized but these limitations are financially driven. One producer had significantly reduced the sow herd and the cow herd due to declining sales.

Cattle are dual-purpose Simmental-cross types. Culled milk cows are used for beef. However, some Holstein-Friesian type cows are found in the countryside. It was not clear how dairy bull calves are utilized in the beef production systems.

Producers seemed to be eager and appreciative for any information that would improve the performance and profitability of their livestock enterprises.

A seminar titled "Conducting Result Demonstrations" was presented to the VSAI Outreach Project faculty. After the presentation, 3 teams were organized and given the task of preparing a result demonstration on animal production. Each team reported on their demonstration. Although each plan was good, the teams tended to make the plan too big and too complicated.

The raion and animal science specialists are working with livestock producers but there is still a need for adequate result demonstrations.

It is recommended that the faculty of the Outreach Center Project work toward establishing result demonstration that satisfy producer needs. The following ideas are suggested:

1. Financial record keeping (income, expenses)
2. Performance record keeping (liters milk produced, pounds weight gained, number of pigs born, etc.)
3. Dehorning, castration, vaccinations
4. Weight gains (farm feeds vs. complete rations)
5. Culling based on performance.
6. Herbicides for weed control in alfalfa fields.
7. Utilizing marginal land (land unsuitable for grain production) for permanent grazing areas.
8. Internal/external parasite control.
9. Proper livestock housing techniques
10. Segmenting livestock production (for example-producing feeder pigs, feeding feeder pigs, growing dairy bull calves for beef, etc)

11. Utilize 4-H youth in a pig chain to demonstrate recommended production management.

The model with necessary resources furnished by private corporations and public institutions could be an important factor in educating livestock producers. The model farm could provide producers first hand knowledge on the utilization and profitability of recommended production practices.

***Objective 2 - Determine the appropriateness of the animal science research base in regards to the relevance to farmers needs with suggested needed strategies and/or modifications.***

On-going research focused on the development of grain and forage crops with the intent being to register varieties with the state and to produce and sell seed to farmers as a means of raising revenue for the research unit.

A herbicide/variety study funded and supervised by an international company was the only replicated test observed on the research unit.

Grains are analyzed for nutrient content but laboratory efforts are segmented and equipment not as modern as it could be.

It was unclear how, where or if animal scientists are conducting basic live animal research trials.

Scientists at the Feed Research Institute have developed grain based swine rations which seem adequate for efficient swine production. However, there is no transition of the information from research to the farmer.

For the purpose of statistical analysis, it is suggested that forage research trials be replicated and focused on the forage needs of livestock produced in the Vinnitsa oblast.

Furthermore, animal performance trials are necessary to assess the feeding value of forage varieties. This assessment needs to be in terms of milk or meat production.

Results should be published and reported to farmers by the Outreach Center faculty.

There is a need for soil testing, forage testing and animal testing facilities.

***Objective 3 - Evaluate the current status of feeding livestock with suggestions to maximize the use of locally available feedstuffs.***

Alfalfa, sunflower, canola, wheat, corn and barley are widely grown throughout the Vinnitsa oblast and are excellent products for feeding milk cows, beef cattle or hogs.

From field observations, concentrate feeding of all types of livestock is underutilized by producers.

Some producers were using corn silage but most were using greenchop alfalfa (heavily mixed with weeds) to feed cattle. Hog producers feed greenchop alfalfa but have available concentrate feeds. However, most hog producers have cash flow problems and are unable to buy concentrate feeds.

The Feed Institute, headed by Dr. A.O. Babich, has developed swine rations for various classes of swine. The formulations are available to producers but producers need ingredient sources, storage facilities and feed processing equipment.

The opportunity exists for Extension subject matter and raion specialists to profitably demonstrate faster weight gains and increased milk production through improved rations and feed management. Utilizing feed companies, such as Kiev-Atlantic as resources, would enhance these demonstrations.

Dairymen can be taught ration management. For example, they should be taught to feed the high quality feed to early lactating cows to obtain highest milk production. Lower quality feeds should be fed to dry cows. This can be accomplished through the concept of total mixed rations (TMR) using good quality corn silage, alfalfa hay, grains principally corn, and appropriate minerals and vitamins.

Swine producers can be shown to increase turnover, weight gains and profits by feeding complete concentrate rations rather than greenchop alfalfa to growing pigs. This is an excellent situation to use the 4-H pig chain as a teaching method.

The finish feeding of beef cattle for slaughter can also be shown through concentrate feeding.

Another factor to consider is the availability and use of byproducts (sugar beet pulp, distillers soluble, mill screenings) in the livestock rations. Livestock producers with storage facilities and access to by-products can utilize these ingredients to build complete rations thereby reducing expenses and increasing income.

It is suggested that the appropriate faculty teach ration formulation so that producers will see the necessity for complete rations. To augment this endeavor is the need for feed and forage testing laboratories.

***Objective 4 - Evaluate the current status of animal genetics with suggestions to improve the genetic potential of the livestock.***

Cattle herds are mainly dual-purpose dairy and beef composed of primarily Simmental cross cows. Holstein type cows were observed in various raions.

Simmental type cattle are generally more difficult to maintain during the production cycle. Milk yields are not as great as dairy type cattle such as the Holstein and meat quality in terms of

carcass grade would leave a lot to be desired under the current production system.

Beef breeds observed at the Kyiv Ag Expo 2000 included Angus and Charolais. Other dairy breeds on display were Brown Swiss and Red Holstein. Also on exhibit was a red Ukrainian cow which through selection, would fit either a beef or dairy role. This breed was impressive.

Purebred livestock producers are not found in the Vinnitsa oblast nor are sale barns or commercial/purebred sales sufficiently available to distribute high quality breeding stock. Villagers and small livestock producers have limited access to better quality breeding animals.

Swine herds are mainly the large white breed. Overall, the quality of breeding stock is less than average. Sows seem to be prolific but piglets grow slowly and sows are not fed to their potential for milk production. Growing pigs, although deep sided and wide topped lack dimension in the ham.

Some Duroc and Hampshire hogs were observed at the Kyiv Ag Expo.

Improvements in the genetics of Vinnitsa livestock can be changed dramatically over a short period of time by intensive selection. Outreach Project specialists can play a significant role in this area.

The production of purebred livestock should be encouraged and bull and boar testing programs (either on-the-farm or in a central facility) can be initiated easily. This would aid selection and livestock improvement.

Utilizing artificial insemination is another way to increase production. Although some breeders claimed to use A.I., no hard evidence substantiated this claim. Semen on some of the world's best sires is available from any of many international firms. Therefore, the opportunity exists for method and result demonstrations on this subject.

Niche production - seedstock, feeder pigs, feedout of dairy bull calves, grass feeding weaned calves - offer opportunities for profit taking. The growth of retail fast food outlets and chain supermarkets offer producers the flexibility to tailor livestock operations to profitably meet these demands and needs. Those retail outlets are successful and expansion in this area is likely to continue.

The challenge to the VSAI faculty is to adequately develop result demonstration and seminars to teach livestock selection and marketing. Livestock producers adopting these technologies can be profitable and reverse the downward trend of meat production in Vinnitsa and the Ukraine.

**Attachment 1**

**Scope of Work**

**Vinnitsa State Agriculture Institute Outreach Center Project**

**Proposed Scope of Work for James E. Devillier, County Agent  
LSU Agricultural Center**

**Purpose:** To evaluate, in cooperation with Ukrainian scientists/extension agents, the current status of animal production activities with suggestions to future direction.

**Objectives:**

1. Evaluate current animal science demonstrations, their overall design, direction and scope and suggest needed changes.
2. Determine the appropriateness of the animal science research base in regards to the relevance to farmers needs with suggested needed strategies and/or modifications.
3. Evaluate the current status of feeding livestock with suggestions to maximize the use of locally available feedstuffs.
4. Evaluate the current status of animal genetics with suggestions to improve the genetic potential of the livestock.

**Anticipated Activities:**

**Objective 1**

- a. Visit current and ongoing animal science demonstrations.
- b. Interact with selected VSAI faculty/field personnel on the quality, timeliness, and relevancy of animal science demonstrations.
- c. Document current demonstrations and make recommendations for future demonstrations.
- d. Conduct 1 hour seminar on planning, implementing and evaluating on the farm demonstrations.
- e. Conduct 1 hour seminar on preparing, conducting and evaluating farm visits.

**Objective 2**

- a. Interact with selected VSAI faculty/administration to assess current animal science research projects.
- b. Assesses the relevance of animal science research projects with input from the VSAI faculty/field personnel.
- c. Document the results and make suggestions for future livestock research needs.

**Objective 3**

- a. Assess the current livestock feeds situation with interaction of VSAI

- faculty/field personnel and farmers.
- b. Assess the ability of locally grown feedstuffs to maximize livestock productivity.
  - c. Determine the ability of VASI faculty/field personnel and farmers to integrate these feedstuffs into least cost feeding regimes
  - d. Document results and make recommendations as to future programs and feeding strategies.

**Objective 4**

- a. Conduct farm visits to determine current livestock phenotypes and capabilities.
- b. Assess the abilities of VSAI faculty/field personnel and farmers to utilize current genetic technologies.
- c. Interact with VSAI faculty/field personnel to suggest farm demonstrations and research topics related to genetics.
- d. Document results and make recommendations.

**Duration/Time line**

Each of these 4 objectives will be accomplished during the three weeks of the assignment. Seminars will be conducted the second and third week of the assignment.

**Attachment 2**

**Seminar: Conducting Result Demonstrations**

## Conducting Result Demonstrations

James E. Devillier

LSU Ag Center

June 2000

### Introduction

Result demonstrations are backbone of Extension work

One of the most important teaching methods

Vital to showing how research findings can be adapted to local situations

Establishes confidence and credibility of farmers with agent

Experience with result demonstration increases confidence and ability of extension agent,  
making more effective teachers

Result demonstrations provide information for use in other teaching methods

news articles

circular letters

radio talks

meetings

television

other methods

Definition - a demonstration conducted by a farm producer under the direct supervision of the extension agent to show the advantages and practicality of research findings and recommended production practices and/or combinations of recommended practices.

### Advantages of the Result Demonstration

proves the effectiveness of adopting recommended production practices

effective for introducing new projects

appeals to progressive people

establishes the economics of new practices

provides information for use with other teaching methods and publicity

has a high rate of adoption

enhances and further develops farm and community leadership

establishes confidence in Extension agent and Extension work

### Limitations to Result Demonstrations

sometimes difficult to find qualified demonstrators

can create conflict between agent and other farmers

some external factors can't be controlled

lack of success makes other teaching methods less effective

not adapted to all other subject matter

difficult to reach large audiences

requires considerable time and funds to effectively conduct a result demonstration

## Planning and Conducting Result Demonstrations

Purposes—prove the feasibility of a production practice  
Create credibility for the extension agent  
Create confidence in the agent for the practice  
Increase the prestige of the Extension organization

Planning—shared by the agent, specialist and advisory committee  
analysis of the local situation  
definition of problem  
decision on the changes needed

### The Demonstration Plan

Simple and easily accomplished  
Conduct several demonstrations, one in each farming community  
Utilize resource people—subject matter specialists and researchers  
Written instructions for carrying out the plan  
Written copy of the demonstration plan to all participants—cooperating farmer, agent, specialists, supervisors, etc.  
Record the results—records should include an outline of the plan, recorded results and names of cooperators  
Share the results with cooperators, specialists, other farmers and the news media

### Selecting demonstrators

Can be selected by the extension agent, program committees or advisory committees  
Volunteers  
Demonstrators should be community leaders, successful farmers and responsible citizens

### Conducting the demonstration

Agent should be involved from start to finish  
Visit the demonstrator and demonstration at regular intervals  
As progress is made, agent makes suggestions and gives information  
Record the progress by careful observation, accurate measurements and accurate written information  
Use photographs/slide pictures to show progress and the advantages of the practice  
Summarize and analyze the results to show economic advantages of the recommended practice(s)

### Evaluating the Demonstration

Keeping records very important  
Use records to make corrections and improvements in future demonstrations  
Utilize this information to make future demonstrations more effective  
Use a checklist to help guide the evaluation and planning for next year

### Summary

Result demonstrations basic to Extension work  
Most important of all teaching methods

Confidence builder for Extension agent, farmers and other clientele

## **Attachment 3**

### **Seminar: Conducting Farm Visits**

Conducting Farm Visits  
James E. Devillier  
LSU Ag Center  
June 2000

### Introduction

Informal face to face conversations where information is discussed and exchanged  
participants are usually two or three—agent and farmer or farmer and wife  
can be planned for a specific purpose either to give or obtain help or information  
can occur on the farm, in town, at a farm market, on the street, at social events, at church or  
other settings

### Why conduct farm visits?

Most useful teaching method for determining if recommendations are understood and used  
Assist in developing programs  
helps in conducting programs

### Types of farm visits

get-acquainted visits—getting to know the farmer and his family and they getting to know the  
agent  
technical visits—two factors  
giving correct answers or recommendations to specific problems  
interrelating facts to arrive at a solution to a farm or family situation—i.e. using facts to  
help the farmer analyze the situation and logically arrive at a conclusion or  
judgement for the farm or family  
organizational visits—extending the intercommunicational relationship that exists within the  
community  
interneighbor visit—essential by-product of other educational activities whereby the  
community teaches itself

### Conducting an Effective Farm Visit

extension agent—must be able to get along with people  
—good human relations skills  
—good communications skills  
—a sense of humor  
—must understand the art of living together  
—must possess good technical knowledge  
—must know the community

objectives of the visit—have in mind the specific and broad based purposes of the visit  
finish the visit with a feeling of accomplishment for both parties  
make sure each participant has played a role in the visit  
make sure both parties will look forward to another rewarding  
experience

Guides to an effective and successful visit

- giving affection develops a feeling of security in others
- giving respect develops self-respect in others
- giving help develops abilities/skills in others
- giving approval develops values in others

Summary

Farm visits are essential to Extension work

Visits can be planned or spontaneous

Effective visits will enhance the Extension program and the agents prominence in the community

A record of farm visits enables agents to monitor educational progress and positive change

## **Attachment 4**

### **Checklist for Planning Result Demonstrations**

## Checklist for Planning, Conducting, and Publicizing a Result Demonstration

(Check)

- I. How was result demonstration planned?
- A. Was situation analyzed to ascertain whether local demonstrations were necessary?
    - 1. To provide local proof of the advantages of the practice or practices? \_\_\_\_\_
    - 2. To show to what extent the local results of using the practice would vary from those at the experiment station? \_\_\_\_\_
  - B. Did an Extension worker prepare a written plan for the demonstration before it was established? \_\_\_\_\_
  - C. Who helped to develop the plan?
    - 1. County Extension Agent? \_\_\_\_\_
    - 2. State Extension specialist? \_\_\_\_\_
    - 3. State Extension supervisor? \_\_\_\_\_
    - 4. County Extension planning committee? \_\_\_\_\_
    - 5. The demonstrator? \_\_\_\_\_
  - D. Was there adequate research evidence to indicate the possibility of successful results? \_\_\_\_\_
- II. How was demonstration selected?
- A. By county Extension agent? \_\_\_\_\_
  - B. By Extension planning committee? \_\_\_\_\_
  - C. By local leader? \_\_\_\_\_
  - D. By neighbors at meeting? \_\_\_\_\_
  - E. By demonstrators volunteering? \_\_\_\_\_
  - F. By other ways? (specify) \_\_\_\_\_  
\_\_\_\_\_
- III. How was demonstration started and conducted?
- A. Was county Extension agent present when demonstration was started? \_\_\_\_\_
  - B. Was demonstration conducted under conditions typical of neighboring farms or homes? \_\_\_\_\_
  - C. Was sufficient time allotted to demonstrator to obtain the necessary evidence or proof? \_\_\_\_\_
  - D. Were there check units or other definite bases for comparison? \_\_\_\_\_
  - E. Were pictures taken at beginning and ending of demonstration so as to compare results? \_\_\_\_\_
  - F. Did county Extension agent help demonstrator to obtain materials and services for carrying on demonstration? \_\_\_\_\_
- IV. How was demonstration supervised?
- A. Through:
    - 1. Telephone calls by county Extension Agent? \_\_\_\_\_
    - 2. Circular or other letters? \_\_\_\_\_
    - 3. Office conference with demonstrator? \_\_\_\_\_
    - 4. Farm or home visits to observe progress and suggest procedure? \_\_\_\_\_
  - B. In your opinion was demonstration visited often enough to maintain the demonstrator's interest and to see that succeeding steps were performed as planned? \_\_\_\_\_
- V. How was demonstration followed up?
- A. Were demonstration results publicized through:
 

1. Meetings? _____	8. Exhibits? _____
2. Tours? _____	9. Movies, slides, film strips? _____
3. News articles? _____	10. Pictures? _____
4. Feature stories? _____	11. Other methods? (Specify) _____
5. Circular letters? _____	_____
6. Radio? _____	_____
7. Television? _____	

- B. Did publicity mention name and location of demonstrator? \_\_\_\_\_
- C. Did demonstrator report at a meeting? \_\_\_\_\_
- D. In publicizing results, was the appeal made on the basis of:
  - 1. Satisfactions to be gained through:
    - a. Reduced cost or increased profit? \_\_\_\_\_
    - b. Increased yield or production? \_\_\_\_\_
    - c. Saving of time and energy? \_\_\_\_\_
    - d. Increased efficiency? \_\_\_\_\_
    - e. Improved health? \_\_\_\_\_
    - f. Other? (specify) \_\_\_\_\_
  - 2. Losses or annoyances avoided:
    - a. Low crop yields? \_\_\_\_\_
    - b. Low livestock production? \_\_\_\_\_
    - c. Poor quality-low priced products? \_\_\_\_\_
    - d. Other? (specify) \_\_\_\_\_

(Number)

- VI Summary of results of all such demonstrations of this practice or these practices in county
  - A. How many similar demonstrations of this practice were conducted in county during year? \_\_\_\_\_
  - B. On how many of these demonstrations were records kept and summarized? \_\_\_\_\_
  - C. How many of these demonstrations showed that the practices demonstrated had enough advantages over the old ones to justify their adoption? \_\_\_\_\_
  - D. Approximately how many people are known to have seen these demonstrations? \_\_\_\_\_
  - E. How many people have indicated that they plan to use the practice or practices demonstrated? \_\_\_\_\_
  - F. During how many years have similar demonstrations of this practice been conducted in the county (total number)? \_\_\_\_\_
  - G. How many similar demonstrations of this practice or these practices will be needed in county next year? \_\_\_\_\_

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**Attachment 5**

**Record of Farm Visits**

## Record of Farm Visits

<u>Name</u>	<u>Address</u>	<u>Phone</u>	<u>Date</u>
<u>Members of family</u>		<u>Age</u>	<u>Special Interest</u>

### I. Objectives

- A. What I planned to do
- B. What we accomplished
- C. Future action we agreed to take

### II Home Situation

- A. Special problems of:
  - 1. Farm
  - 2. Home
  - 3. Business
  - 4. Neighborhood

### III Evaluation

- A. What are the possibilities for participation or leadership in homemaking, civic, agricultural, or youth activities?
- B. What are the possibilities for a demonstration, meeting, tour stop?
- C. Could a local leader have made this visit? Or helped? Or handled the follow-up?
- D. Will this visit stimulate useful discussion among the neighbors?
- E. Was this visit convenient, timely, of proper length, enjoyable?
- F. Consider suggestions to yourself from yourself.

**Attachment 6**

**Schedule for James Devillier's Visit**

### Schedule for Mr. James Devillier's visit to UCFTO

Date and time	Name of the activity	Responsible person
9 p.m.	<b><u>June 5, Monday</u></b> Arriving at the "Podillia" hotel	Loyanych, V. Sereda
9 am-12.00 12.30 - 1.30 pm 2 pm - 4 pm	<b><u>June 6, Tuesday</u></b> Meeting with the Center's staff Lunch at the office Meeting with the faculty team at the University	Loyanych, Tesliuk
9 am - 12.00  1 pm - 2 pm 2 pm - 5 pm	<b><u>June 7, Wednesday</u></b> Visit to the Feed Institute of the National Academy of the agricultural sciences. Getting information on their research on production feeds. Lunch at the University Tour to the demonstration plots of Feed Institute	Vanzhula U.  Loyanych  Vanzhula U.
9 am - 12.00  12.00 - 1 pm 1 pm - 7 pm	<b><u>June 8, Thursday</u></b> Tour around Vinnytsia (Pirogov's museum, boat trip) Lunch at the office Trip to Kryzhopil raion office, visit to private farms and demo plots on their site	Tesliuk L.  Pryshliak
7 am - 8 pm	<b><u>June 9, Friday</u></b> Trip to Kiev to visit agricultural exhibition	Yurchenko, Tesliuk
	<b><u>June 10, 11 - days off</u></b>	
9 am - 5 pm	June 12, Monday Visiting Gordiyevka stock breeding farm in Trostianets raion	V. Todosiychuk, O. Harkovenko, L. Poliovyi
9 am - 12 am 1 pm - 2 pm 2 pm - 5 pm  6 pm	<b><u>June 13, Tuesday</u></b> Work at the Center's office Lunch at the Center's office Seminar for the faculty of the project (Center's office) Dinner	G. Loyanych  V. Mamalyga  V. Yurchenko, U. Vanzhula

	<b><u>June 14, Wednesday</u></b>	
9 am - 5 pm	Visiting Koziatyn raion office, meeting with farmers	O. Nedbaliuk, N. Kredentser
	<b><u>June 15, Thursday</u></b>	
9 am - 5 pm	Visiting Hmelnyk raion Extension Office, meeting with farmers, visiting a private farm in Ulani village	V. Pryshliak, S. Kryzhanivsky
	<b><u>June 16, Friday</u></b>	
9 am - 5 am	Visiting Mogyliv-Podilsky raion office. Meeting with farmers.	V. Pryshliak, S. Kryzhanivsky
	<b><u>June 17, 18 - free days</u></b>	
	<b><u>June 19, Monday</u></b>	
9 am - 5 pm	Visiting Orativ raion. Meeting with the farmers (V. Motusiak)	O. Nedbaliuk, V. Pochtar, Y. Vanzhula
	<b><u>June 20, Tuesday</u></b>	
9 am - 5 pm	Visiting Shargorod raion office, participating in farmers workshop	V. Pryshliak, M. Paholchak, V. Yurchenko, E. Polishchuk
7 pm	Dinner	P. Sauliak, V. Mazur
	<b><u>June 21, Wednesday</u></b>	
9 am - 1 pm	Seminar for raion specialists at the Center's office	O. Nedbaliuk, V. Pryshliak, V. Todosiychuk
1 pm - 2 pm	Lunch at the office	
2 pm - 5 pm	Tour around the city, shopping, fun	Tesliuk L.
7 pm	Dinner	N. Pravdiuk, N. Fishchuk
	<b><u>June 22, Thursday</u></b>	
8 am	Trip to Kiyev. Visiting companies, producing feed additives	V. Yurchenko, U. Vanzhula, Paul
	<b><u>June 23, Friday</u></b>	
	Departure	V. Sereda

**Attachment 7**

**List of Raion Specialists and Map of Raion Offices**

## List of Raion Specialists

### Northern Region (Olexandre Nedbalyuk)

1. Yaroslav Voitenko (Khmelnik, Lytin)
2. Sasha Krivokov (Vinnytsia, Kalynioka)
3. Natalya Fill (Lipovets)
4. Nadya Kredentser (Kozyatin)
5. Vasyl Potchar (Orativ, Pogrebishcher)

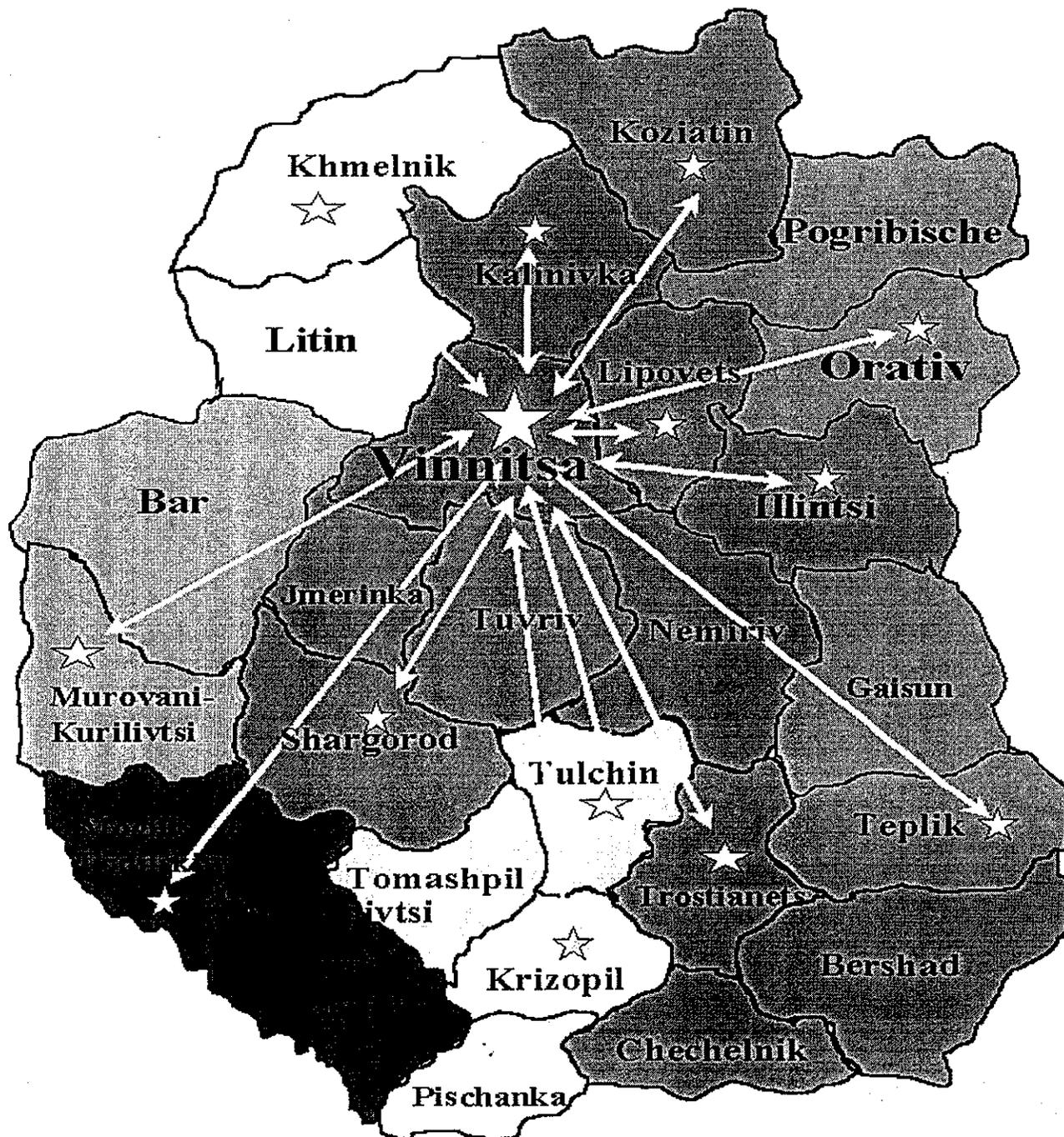
### Western Region (Viktor Prushliak)

1. Serhiy Kryzhanivsky (Mogiliv - Podilsky, Chernivtsy, Yanipil)
2. Mikola Paholchak (Sharagorod, Tyvtiv, Zhmerinka)
3. Ruslan Dmitruk (Mur -Kuriliotsy, Bar)
4. Valeriy Fedorishin (Krizhopil, Pishchanka)

### Eastern Region (V. Todosiychuk)

1. Ivan Katchula (Illyntsy, Neminiv)
2. Kyryl Kachan (Teplik, Jaisyn)
3. Yuriy Zevchenko (Tulchin, Tomashpil)
4. Oleg Kharkovenko (Trostyanets, Bershada, Chechelnik)

# Map of Raion Offices



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**Attachment 8**

**Daily Activities Report**

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*Daily Activities of James Devillier*  
*On Assignment to Vinnitsa, Ukraine*

**Monday June 5, 2000** - Arrived at Kyiv airport at 3 p.m. several hours before President Clinton's arrival and 6 hour visit. Met by Larry Brock and Slava Sereda. Traveled to Vinnitsa and secured lodging for the duration at Hotel Podilla.

**Tuesday June 6, 2000** - Met at the Vinnitsa State Agriculture Institute Center for Private Farmer Training and Outreach Project herein after referred to as the VSAI Extension State Office. Welcomed by the Center staff - Dr. Grigory Loyanich, Extension director; Dr. Leonid Sereda, Rector VSAI ; Mrs. Vanda Yankovenko, interpreter, and Paul Ivanicky, U.S. Project Liaison officer. Other staff members included Ludmilla Tesluk, interpreter; Larisa Kovalchuk, accountant and Anatoly Vlasyuk, driver.

Ivan Petrovich, head of agro-industrial board Khmelnytsky oblast and Dr. Mikahail Samokish, Rector of Podilya Agricultural and Engineering Academy surprised us with a visit and invited the group to visit the Academy and the town of Kamyanyets - Podilsky. The schedule for Thursday was altered to facilitate this visit.

In afternoon, traveled to Teplik raion and met Kyril Kachan, raion specialist. Visited with Viktor Purdyk a diversified crop, fruit, livestock farmer and active participant in Extension programs. Viktor grows sugar beets, wheat, barley, apples, currants, and other fruits and had some cattle (which seemed poorly managed). He also had a bread shop and other retail outlets for his crops..

**Wednesday June 7, 2000** - With Yuri Vanzhula as guide, visited the Feed Institute directed by Dr. A.O. Babich. Institute founded in 1930 and has been in Vinnitsa 30 years. Employs 150 people, 39 of which are PhD professors. Conducts selection and development of forage varieties at this site and at 40 other 'research' units.

Laboratory equipment was outdated and analyses seemed uncoordinated. Field plots were generally geared more toward seed production than research trials. There were several replicated tests of herbicides on sunflowers but these were under the supervision of Mon Santo. Forage varieties in small plots showed some potential, but again the 'research' efforts seemed uncoordinated as the stress was on developing varieties that could be registered with the state. Selling seeds to farmers apparently is the funding for the Institute. No evidence existed of a plant breeding laboratory or of research aimed at determining animal performance by varieties of forage. No forage testing was available to the farmers.

**Thursday June 8, 2000** - Traveled to Kamyanyets - Podilsky in the Khmelnytsky oblast to the State Agrarian and Engineering Academy in Podilya. Dr. Samokish took the group on a grand tour of the university library and museum, the town and its churches and castle. Dr. Samokish was pitching for an extension project for his university. He appears to be a good administrator and leader and apparently has the resources - land, facilities and scientists - to sustain an extension program. Given the history of the locale, Larry Brock suggested he do a feasibility studies for developing a tourism industry. Oksana, a university student and exchange student graduate of a New Jersey high school was an excellent interpreter. Not sure we accomplished much but we had a good time.

**Friday June 9, 2000** - Traveled to Kyiv with Paul Ivanicky and animal scientist, Vasily Yurichenko to the agricultural exposition. Cattle of dairy and beef types were on display - Holstein both black and red, Brown Swiss, a red Ukrainian type, dual purpose Simmental and Simmental crosses, Angus and Charolais. The dairy type cattle appeared to be very functional and productive. The beef types were for dual purpose and lacked considerably in muscle and quality. Swine on display were mostly large whites with a sprinkling of Duroc and Hampshire. The swine breeds showed excellent top development but lacked dimension and definition in the ham. Feeds for cattle and swine were composed of wheat and sunflower with little corn - not the highest quality. The cattle rations were more finely ground than the swine rations - which is a reverse of the way it is done in the U.S. Swine were also being fed freshly cut whole alfalfa plants. Equipment displays were modern with names such as John Deere, Case I-H and Claas in prominence, but apparently there is no money to purchase the equipment. Returned to Vinnitsa late that evening.

**Saturday and Sunday June 10 and 11, 2000** - weekend off:

**Monday June 12, 2000** - Traveled to Trostianets raion to visit the Gordiyevka stock breeding farm. This is an old collective farm that has Simmental cross dual purpose cattle and seems to multiply rather than develop high-quality breeding cattle. The cows average 14L of milk per cow per day which approximates 30 pounds. Milking cows were in stanchions and fed greenchop alfalfa (also contained stemmy grasses and many weeds). Milking procedures were less than sanitary (as defined by U.S. standards) and milk room equipment and conditions were also not up to acceptable sanitary levels. Heifers are maintained in dry lot and fed the alfalfa green chop. There is no indication that concentrate feeds are used at any level of production. Heifers were of Simmental - crosses although the manager says he uses red Holstein bulls (cattle don't reflect this red Holstein phenotype). The farm supposedly uses A.I. but there was no evidence of this and there is also no evidence of any performance records on each cow nor any type of selective mating system. It is not clear what happens to the dairy bull calves produced on this farm. The opportunities are limited for individual farmers to buy stock from this farm.

**Tuesday June 13, 2000** - Worked at the Center's office and changed seminar from the afternoon to the late morning. A seminar titled "Conducting Result Demonstrations" was presented to the VSAI faculty and district supervisors. After the presentation, the group was divided into 3 teams, each team assigned to a topic and given a checklist on planning, conducting and evaluating result demonstrations. Each team is to prepare a result demonstration and give a report at the next seminar.

**Wednesday June 14, 2000** - Traveled to Koziatin raion and met Nadia Kredentser, raion specialist. Prior to visiting farmers, spent some time with former collective managers. Each of these 5 people had 'important' duties with the collective and all do not want to embrace the Extension educational concept. Fortunately, that doesn't appear to affect the Extension work in that raion. Met with farmers, Petrov Shostak, Mykola Volynets and Vasil Dimiduk. Each were farming grain crops (wheat, barley, buckwheat) or fruits/vegetables (apples, potatoes, carrots) or livestock (dairy, swine). Mr. Shostak had 140 hectares of land and was interested in building a modern dairy facility. He has cows, access to more cows, suitable land for feed and forage (pasture included),

water, electricity and sales for milk. He needs financial and management/construction assistance. Mr. Volynets has a slaughter house and swine production facilities and appears to be quite capable of managing his operations. His needs appear to be along the lines of swine rations and production management. Mr. Dimiduk farms 150 hectares of sugarbeets, wheat, potatoes, carrots and some cows. He stated that he has chemical engineering training and has worked as a farm consultant. Not sure what his needs are.

**Thursday June 15, 2000** - Worked in Center office as visit to Hmelnyk raion was cancelled.

**Friday June 16, 2000** - Traveled to the Mogyliv-Podilsky raion on a chilly rainy day. Five specialists and district supervisor traveled with us. Met Serhiy Kryzhanirsky, raion specialist and we visited with Serge Dmytrenko; a farmer interested in swine and dairy production. Mr. Dmytrenko has access to various buildings which need remodeling for his stated purposes. The building he built needs further modification for swine production. Three other farmers with interest in livestock production participated in the farm visit. V. Pryshliak, district supervisor, expressed interest of local youth in 4-H club program. Larry Brock mentioned the 4-H pig chain program which has had success in the U.S. After some discussion, if 4-H club members are interested in this project, support will be found to initiate the program.

**Saturday and Sunday June 17 and 18, 2000** - weekend off

**Monday June 19, 2000** - Tuesday's activities were cancelled and Monday's activities switched to Tuesday as the office was closed Monday due to religious holiday for the Ukrainian Orthodox Church.

**Tuesday June 20, 2000** - Traveled to Orativ raion and met Vasyl Pochtar, raion specialist. Accompanied by Yuri Vanzhula and Vasily Yurichenko animal science specialist and Olexandre Nedbaliuk, district supervisor. Mr. Pochtar is an older man and former collective farm manager. However, he seems well versed in production agriculture and knows all the farmers in his area. Impressed by the display of bulletins in his office. Toured the diversified farm of Ludmila and Mykola Motuziuk. They grow grain crops (wheat, barley, corn), sugar beets, alfalfa and other forages. The Motuziuks have 150 dual purpose cows, 100 sows, a slaughter facility, a flour mill and are remodeling a milk plant to produce cheese and butter. They sell sausages of all types and cured meats to markets in Kyiv. Mr. Motuziuk, who was out of town that day, is developing pastures for his livestock and apparently has operating capital to fuel his agriculture enterprises. A stimulating and inspiring visit.

**Wednesday June 21, 2000** - Worked in Center office and presented seminar on "Conducting Farm Visits." Prior to seminar, a leader from each previously assigned group presented in detail plans for a result demonstration. Each plan was well thought out, had good subject matter but for the most part were too complicated. The stress and emphasis then was on keeping the plan simple and easy to accomplish as well as easily adoptable into the farmer's operation.

Upon completion of the seminar, two faculty were selected to play the role of farmers and Extension raion specialist. They acted out a get-acquainted farm visit. Each played their role extremely well and the concept of farm visits was vividly demonstrated. Hopefully, all faculty benefitted from these exercises. In addition, lectured to 17 students about livestock production in

the U.S. Louisiana and East Feliciana Parish. Fielded some difficult yet candid questions.

**Thursday June 22, 2000** - Traveled to Kyiv. Met with David Sweere, CEO of Kyiv-Atlantic Ukraine, Ltd., a feed company. Discussion centered on the general economic, agricultural and political situation in the Ukraine as well as the mission of Kyiv-Atlantic which is to promote profitable livestock production. Opportunities are there to work with Mr. Sweere and his company on result demonstrations involving feeding livestock.

**Friday June 23, 2000** - Traveled with David Sweere and a Danish group to a former collective farm. Buildings and facilities at this farm are available for a large swine operation. Visited USAID. Reported on the project and met with agriculture staff member. Met with Dr. Pulshin at the World lab and talked to Dr. Cardum and two other staff members of the Veterinary Research Institute. They are eager to work with the LSU School of Veterinary Medicine but it seems to me that they should turn their emphasis to training veterinarians that can go to work serving the animal industry needs of the Ukraine.

**Saturday June 24, 2000** - Departed Kyiv for the journey home.