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AgroInvest Project

Regulatory and Institutional Barriers for Increasing Access to Finance for Small and Medium-scale Producers

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REGULATORY & INSTITUTIONAL BARRIERS FOR SMALL AND MEDIUM SCALE PRODUCERS TO ACCESS CREDIT IN UKRAINE

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Kyiv, Ukraine
June 27, 2011

LIST OF ACRONYMS

ADM	Archer Daniels Midland
AMACO	American Machinery Co., Ukraine
AMDI	Agricultural Markets Development Institute (Ukraine)
APR	Annual Percentage Rate
CLC	Commercial Law Center (Ukraine)
CPR	Cedula de Producto Rural
FINREP	Financial Sector Development Project (Ukraine)
FYE	Fiscal Year-End
GOU	Government of Ukraine
Has.	Hectares
IFC	International Finance Corp.
LINC	Local Investment & National Competitiveness (Ukraine)
NBFI	Non-Bank Financial Institution
NBFR	Non-Bank Financial Regulator (Ukraine)
NBU	National Bank of Ukraine
SMP	Small & Medium Producer
SOW	Scope of Work
UAH	Ukrainian Hyrvna ($1.00 = UAH 7.95)
UAL	UkrAgroLeasing
UMLP	Ukraine Micro-Lending Program
USAID	US Agency for International Development
VAT	Value-Added Tax

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SECTION 1.0
EXECUTIVE SUMMARY & OVERALL CONCLUSIONS

The purpose of this Report is threefold:

1. To assess the ability of Small and Medium Producers (SMP's) in Ukraine to access financial services from suppliers of credit.[1]
2. To identify constraints that limit SMP's access to credit[2], including constraints that exist within SMP's themselves, public policy constraints including but not limited to regulations and legislation, primarily Federal (Government of Ukraine) regulations and legislation, and institutional constraints[3], defined as constraints that exist within and among suppliers of credit.
3. To offer conclusions, as well as make specific recommendations that will serve to improve SMP access to credit in the future.

SMP's in Ukraine, defined for purposes of this report as farming operations of a size of less than 3,000 Hectares (Has.)[4], currently have very limited access to financial services from Ukrainian suppliers of credit, including but not limited to banks.

As charged by the Scope of Work covering this report, included in Appendix A, this report will cover the following:

- Overall conclusions
- Specific conclusions and discussion of conclusions
- Specific recommendations and discussion of recommendations
- Demand for financial services by SMP's, including:
    - Estimated unmet demand[5] for financial services for SMP's broken down by short-term borrowings (less than 12 months); medium-term borrowings (13 months to 5 years); long-term finance (5 years and greater).
    - Credit issues at the SMP level that constrain the ability of SMP's to obtain access to credit.
- Supply of financial services for SMP's, including:
    - Institutional barriers that may constrain the ability of suppliers of credit to meet the unmet demand of SMP's, including but not limited to current financial conditions of banks and other suppliers of credit, and the ability to effectively assess SMP credit.
    - Policy and regulatory constraints, mostly but not exclusively, policies and regulations currently promulgated and enforced by the Govt. of Ukraine (GOU) that, singly or collectively, constrain the ability of suppliers of credit to address the unmet demand.

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[1] For purposes of this report and as defined in the Scope of Work included in this report in Appendix A, a "supplier of credit" is any entity supplying credit to SMP's, including but not limited to banks, non-bank financial institutions (NBFI's), other deposit-taking institutions such as credit unions and value chain participants, including input suppliers, buyers, processors and others.
[2] Please see Section 1.6 of this Report, "What is Access to Credit?," for a thorough explanation of what is meant by the term, "Access to Credit."
[3] For purposes of this report, the term "institutional," or "institutional constraints" refer to constraints within and among suppliers of credit, as opposed to "policy" or "regulatory" constraints that may exist within and among public bodies, including but not limited to the GOU.
[4] There are several definitions of an SMP. For purposes of this report an SMP is any farm, under 1 ownership, that is less than 3,000 Has.
[5] For purposes of this report "unmet demand for credit" is defined as demand for credit from SMP's not being currently met by Suppliers of credit, including but not limited to financial institutions (banks and non-bank financial services) and value chain participants (input suppliers, processers, etc.)

1.1 Overall Conclusions

1. The Major Barrier to SMP's obtaining additional Credit is the inability of most SMP's to generate documented cash flow[6] sufficient to repay a borrowing, regardless of the type of credit supplier extending that borrowing. Without such improvement there will be little or no improvement in SMP access to credit in Ukraine. Many SMP's who may well have sufficient documented cash flow either do not have any financial records supporting their cash flow, or they operate strictly in the cash market, for both inputs and sales of product.

2. On the Policy and Regulatory side, the emphasis should be not on passing entirely new laws and regulations that might improve SMP access to credit, but enacting and improving the provisions of relevant draft laws, existing regulations and existing agricultural support programs, including:
   - The Draft Laws on Land Markets and Land Cadastre which will enable the lifting of the land moratorium
   - Improving regulations influencing the volume of bank lending to agricultural enterprises, primarily but not exclusively regulations issued by the National Bank of Ukraine (NBU)
   - Implementing existing regulations such as capitalizing the Indemnity Fund that will cover losses from licensed warehouse issuing warehouse receipts
   - Reorienting existing GOU agricultural support programs to better serve the needs of SMP's
   - Passage of the Draft Law on Credit Unions, to allow credit unions to lend to legal entities, in addition to natural persons.
   - The desire of the current Minister of Agriculture of Ukraine to reform the system of agricultural education in Ukraine, to ensure that more graduates of Ukrainian agricultural universities to spend time working in farming regions after their graduation.

With respect to the last bullet point in No. 2, above, the GOU currently spends substantial sums providing tuition for students in agricultural universities, yet according to many people we spoke with in connection with the preparation of this report most of these graduates remain in Kyiv. At the same time part of the problem described in No. 1, above, partly results from a limited or non-existent agricultural extension service that would help SMP's improve their management practices.

While there are encouraging developments in the conditions for SMP's in Ukraine obtaining additional credit, the SMP's must improve their documented ability to obtain and service additional debt obligations. Even if all of the policy and regulatory constraints are removed, as long as SMP's have inadequate documented cash flow necessary to service new debt, SMP's access to credit will be severely restricted. Improvements in the policy and regulatory climate facing SMP's will certainly improve the likelihood that those SMP's who can establish documented cash flow will obtain credit on reasonable terms.

As will be shown in this report SMP's in Ukraine potentially represent a very large market for suppliers of credit. As will be shown in detail in Sections 2.0 and 4.0, this report estimates that the annual unmet demand for credit among SMP's in Ukraine is approximately $7.2 billion. This includes not just a large potential market for lending but also, as will be discussed extensively in this report, a large potential market for deposits and retail products.

There is no question that SMP's operate in a very difficult environment, as it relates to the current policy and regulatory environment. Even in the best of times, and even with improved cash flow, it would be difficult for most SMP's in Ukraine to obtain necessary credit.

[6] "Documented cash flow" refers to cash flow that is supported in SMP financial statements, SMP bank accounts, customer and supplier activity and other sources that a supplier of credit may rely on do establish that an SMP has the ability to repay a contemplated debt obligation.

At the same time suppliers of credit in Ukraine operate in an extremely difficult credit environment, primarily although not exclusively as a result of the documented inability of most of SMP's to generate sufficient cash flow to repay loans, and, secondarily, as a result of a difficult public policy environment. In addition some suppliers of credit, especially but not exclusively national banks and particularly loan and credit officers, have limited experience in evaluating and underwriting agricultural credits.

It is hoped that this report will play a small role in improving both the conditions faced by SMP's, and the conditions faced by suppliers of credit.

1.2 Encouraging Developments – Supply of Credit

There have been encouraging developments in the willingness of suppliers of credit to extend credit to SMP's. There has also been encouraging developments concerning the willingness of the Government of Ukraine (GOU) to improve policy and regulatory conditions that will facilitate increased extension of credit to SMP's. In many cases, especially with short-term credit and specifically the ability of input suppliers to extend credit and the status of warehouse receipts, many of the conditions are in place and, if realized, could result in an efficient system of extending credit to SMP's. However GOU laws and regulations, especially those described above, need to be implemented in order to insure that facilities that will help improve SMP access to credit, including but not limited to warehouse receipts, will operate properly.

The potentially encouraging developments in the interest and ability of suppliers of credit to offer additional funding to SMP's include:

- The introduction of financing from suppliers of inputs (fertilizer, pesticides, etc.), along the lines of the "Cedula de Producto Rural" (CPR) used in Brazil.
- The existence of post-harvest financing from some buyers such as ADM.
- Increased activity by some banks, such as ProCredit Bank, offering attractive lending products with a turnaround, from application to decision, in as little as 7 days.
- Increased activity of regional banks in SMP lending, often with the support of donor projects such as Ukraine Micro-Lending Program.
- Mobilization of Credit Unions to lend to the smallest SMP's (50 Has. or less), perhaps by adopting ideas and policies pursued by the Farm Credit System in the US.
- New approaches to underwriting equipment loans to groups of SMP's, perhaps based on a tractor center.

Each one of these developments will be discussed in detail in this report.

Although there are policy, regulatory and institutional gaps that need to be filled before each of these developments can be expanded to their full potential, the conditions for their expansion already exist in Ukraine. There is no need for the Verhovna Rada (Parliament) of Ukraine to pass new laws, other than those Draft Laws already before the Parliament, or for the GOU to enact new regulations. Instead the emphasis should be on implementing existing regulations, and passing existing draft laws as further described above.

Conditions are also present for considering new approaches to extending credit, especially in equipment finance and the further utilization of credit unions to provide credit to the smallest SMP's (less than 50 has). Finally, conditions are present to expand credit availability for SMP's producing high-value crops, such as vegetables and fruits, especially through the expansion of purchase order financing that is already being done in Ukraine to a limited extent.

However these developments, while encouraging, are not going to achieve their full potential unless the documented ability of SMP's to service debt obligations improves substantially. Suppliers of credit must see documented cash flow from SMP's, sufficient to cover the debt service on the contemplated obligation, or they will not extend credit. This applies to ALL suppliers of credit, including both financial institutions as well as value chain participants.

1.3 Encouraging Policy & Regulatory Developments

There are also encouraging developments on the policy and regulatory side that may serve to improve the conditions for suppliers of credit to supply increased volumes of credit to SMP's. These include:

- Establishment of an automated registration system for registering warehouse receipts (and secured interest in warehouse receipts in cases where they are used as collateral for post-harvest financing), which can be easily expanded to include registration for CPR's and other types of short-term credit.
- Changes in National Bank of Ukraine (NBU) rules that may make it easier for Ukrainian banks to hedge currency risk that arises when they make loans in Hryvna with capital denominated in hard currency.
- Relaxation of NBU reserve requirements for agricultural loans.

1.4 Policy & Regulatory Developments – Reason for Concern

On the policy and regulatory side there are also reasons for concern, including the following:

- The terms of the two Laws governing the end of the moratorium on sale and mortgaging of agricultural land ("the moratorium"), the Draft Law on Land Markets and the Draft Law on Land Cadastre, are unknown as of this writing, and may contain provisions that make it virtually impossible for SMP's to purchase the land they are currently renting, and thereby obtain clear and marketable Title to their land. "Clear and marketable Title" is defined as a system of clear ownership, including a cadastre number and a recognized system of metes and bounds[7], combined with the ability of an SMP to use his or her Title to obtain mortgage financing from a financial institution, AND the willingness of the financial institution to extend mortgage financing partly based on such Title. Clear Title is only a sufficient condition. Banks must also be willing to recognize clear Title and be willing to either extend mortgage financing where clear Title exists or accept land with clear Title as collateral.
- Without an efficient and transparent means to obtain clear and marketable Title, SMP's are left open to predatory acquisition, especially from the large agro-holdings defined for purposes of this report as farms over 10,000 Has.[8]
- Taxes and, until they were lifted, quotas on the export of grains, that serve to suppress the price paid to SMP's for their grain and may, under certain circumstances, result in SMP's deciding to substantially curtail sowing of grain.
- Existing GOU agricultural policies as they are currently utilized, primarily in the areas of interest rate subsidies for agricultural loans, rebates for acquisition of equipment, and the recent support programs for the breeding of livestock all, in their current configuration, serve to favor agro-holdings.
- Difficulties faced by SMP's in competing with agro-holdings, partly as a result of lack of access to modern equipment, cropping patterns used, lack of direct access to export markets and, often, poor management.

1.5 Ukrainian SMP's - Operating in a Global Market but With Local Constraints

All other things being equal, there should be no significant economies of scale in agriculture in Ukraine, between SMP's over, perhaps, 1,000 Has., and less in the case of commercial vegetable growers, and agro-holdings. SMP's of 1,000 Has. or more should be able to compete effectively with larger agro-holdings. To take one example, a 1,500 ha. SMP in Ukraine is equal in size to a large farm in Iowa and enjoys the same quality soil. A 1,500 hectare SMP in Ukraine would be larger than all but the largest farms in Germany, where a

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[7]"Metes and bounds" is a system or method of describing land, real property (in contrast to personal property) or real estate.

[8] For purposes of this report an "agro-holding" is any farming operation that, collectively, farms over 10,000 has. One agro-holding may (and usually does) include several distinct farms, some of which may be 3,000 has. or smaller.

large farm is 200 Has. However in Ukraine, for the reasons specified above and throughout this report, things aren't equal. Most SMP's do not generate sufficient documented cash flow to service new debt obligations and, to a great extent, GOU public policy appears to favor agro-holdings.

The World Soil Map at the end of this Section shows the distribution of soils in the arable areas of the world. The soils shown in green are the most productive. Large tracts of the most productive soils are concentrated in only 4 countries in the world: US; Argentina; Brazil; Ukraine. Ukraine's productive soil is a huge resource available to SMP's in Ukraine, but can only achieve its full productivity if both adequate capital is applied to production from this soil and farms are efficiently managed.

As evidence, there is a recent study that argues that if there was an open market for Ukrainian farmland, and assuming further that the soil quality of a Ukrainian farm is equal to or better than the soil quality of a farm in Iowa, the price of a hectare of farmland in Ukraine would, in an open market, likely fetch a fraction of comparable farmland in Iowa.[9] In Iowa, as in Western Europe, it is reasonable to expect that a well-run 1,000 Ha. farm will generate $1,000/Ha. in revenue. In Ukraine, the example of a SMP, shown in Section 4.1 of this report, has revenues of just over $406.00/ha.

Given that SMP's have to pay international prices for inputs, while at the same time are generating revenues of only 40% of their Western counterparts, it is difficult for a lender to justify underwriting a transaction for a farm whose productivity is less than half of what is generally accepted. It is virtually impossible for an SMP to generate sufficient cash flow necessary to support a loan if his productivity is as low as shown in Table 9 in Section 4.1.

1.6 What is "Access to Credit?"

For purposes of this report the term "Access to Credit" refers exclusively to obtaining credit (borrowed money) from a supplier of credit, defined as any entity extending credit to an SMP. Obtaining equity is not part of this report.

"Access to Credit" includes financing from all suppliers of credit, as defined in this report and in the Scope of Work covering this report shown in Appendix A.

The term "Access to Credit" also includes the following:

- Investments made by value chain participants[10] that improve the ability of SMP's to obtain supplies necessary to their operations but may not, in and of themselves, involve extension of credit to SMP's. As shall be shown in this report, a few value chain participants in Ukraine have made significant investments that are allowing SMP's, especially small SMP's, easier access to inputs and supplies necessary for them to operate successfully. Anything that assists in the ability of SMP's to operate improves SMP's access to credit, even if indirectly.

- Improvements in farm management that serve to increase cash flow and thereby increase access to credit. As stated throughout this report, without documented cash flow sufficient to repay the obligation, no supplier of credit will extend any credit to an SMP.

- The skeptical attitude that many SMP's in Ukraine have toward borrowing money. From the field work done in connection of this report it is evident that many SMP's Ukraine are reluctant to borrow money at interest rates they consider to be unfair which seems, from fieldwork, to be anything higher than 20% annual percentage rate (apr).

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[9] "The Value of Farmland – Expected Farmland Prices in Ukraine after Lifting of the Moratorium on Farmland Sales," March, 2011, German-Ukrainian Policy Dialogue in Agriculture/Institute for Economic Research and Policy Consulting.

[10] The term "value chain" refers to several entities each adding value to a product, in this case one or more agricultural commodities. "Value Chain Participant" refers to a company or other entity within the overall value chain (sometime referred to as a "Value Chain Actor."

However if it turns out that an SMP can effectively use money costing 20% in his business, as is almost certainly the case for SMP's in Ukraine, then the SMP's reluctance to borrow at 20%, simply because he believes the interest rate is too high, effectively serves as a limitation on access to credit just as surely as any other factor covered in this report.

- The ability, or inability, of suppliers of credit, especially banks and other depository institutions, to effectively sell their product, in this case a business borrowing, regardless of whether it is short, medium or long-term, to their prospective customers. If suppliers of credit are unable to effectively convey the economic benefits of their product to their prospective customers, their inability will limit access to credit just as surely as any other factor, institutional or regulatory, that will be covered in this report.

- The inability of some suppliers of credit to effectively underwrite SMP credits. If bank lending officers, to take one example, are unable to understand how a farm operates, and evaluate the quality of management, SMP access to credit will be substantially reduced.

- Applying to banks and other deposit-taking institutions including credit unions and microfinance institutions, "Access to Credit" includes not just the extension of credit, but also the development of a deposit and retail relationship with SMP's. In this case, "Access to Credit" includes deposit and retail relationships[11], as well as lending relationships.

Deposit-taking institutions, including banks and credit unions, are intermediaries. They make their money off of taking deposits and/or fee income from retail relationships, and lending it out to their borrowers. Deposit-taking institutions will be extremely reluctant to target a market, such as SMP's for extension of additional credit, unless they also have first established a deposit and retail relationship with that market.

1.7 Organizing Principles of the Report

<u>Credit & Availability of Credit</u> - The most important subjects in this report are not public policy and regulatory constraints, or institutional barriers to the supply of credit, or even supply of credit itself. The most important subjects in this report are credit and availability of credit.

Credit, or obtaining credit, is defined as whether or not an SMP has adequate documented resources sufficient to repay a debt obligation, whether it is short, medium, or long-term credit. Suppliers of credit, regardless of whether they are a bank, an input supplier or a buyer, are interested in only 1 thing – getting repaid.

Without credit, and the ability for both the lender and potential borrower to establish the potential borrower's ability to repay the contemplated obligation, there is no access to credit for SMP's. Even if Ukraine had the best public policy in the world relating to agriculture, without the documented ability to repay an obligation there is no access to credit.

For purposes of this report the following definitions will be applied:

- Credit - the <u>documented</u> ability of an SMP to repay a business borrowing.
- Underwriting - the process by which a lender determines whether or not a prospective borrower has sufficient financial resources, primarily sufficient cash flow, with which to repay the business borrowing.
- Availability of Credit – The ability of a borrower who has the documented ability to repay a business borrowing to actually obtain credit.

[11] Retail relationships include services such as payment processing, custodial services, and other services normally offered by deposit-taking institutions as well as other financial institutions.

Without availability of credit, the term structure of a loan and the interest rate on a loan are irrelevant. There can be unlimited supply of credit in a market, but without availability supply is meaningless. A major part of this report will cover reasons why some SMP's, those who have documented ability to repay, cannot obtain credit, including recommendations to improve availability.

The principles of credit and underwriting are always the same, no matter where in the world the borrower and lender are located, and cannot be explained away by saying, for example, that the borrower is an SME in an emerging market, an SMP in Ukraine, etc., and SMP's are disadvantaged and therefore should be exempted from internationally recognized principles of credit and underwriting. This is impossible. SMP's never will be, and should not be, exempted from internationally recognized standards of credit and underwriting.

On the other hand the processes, as well as the information that a lender might use in underwriting a loan, and the types of loan products offered, may be different from one location to another, depending primarily on specific conditions found in that market. These processes and products may improve the overall access to credit in that market and therefore will be a major part of the specific recommendations presented in Section 3.0.

It is impossible to take credit and underwriting procedures used in the US and other industrialized countries, and apply them to Ukrainian conditions. If this was attempted, the supplier of credit making such an attempt would not make a single loan. However, it is possible to devise processes, and products, that may improve access to credit for Ukrainian SMP's, without deviating from internationally-recognized standards of credit and underwriting. It is these processes and products that are a primary focus of this report.

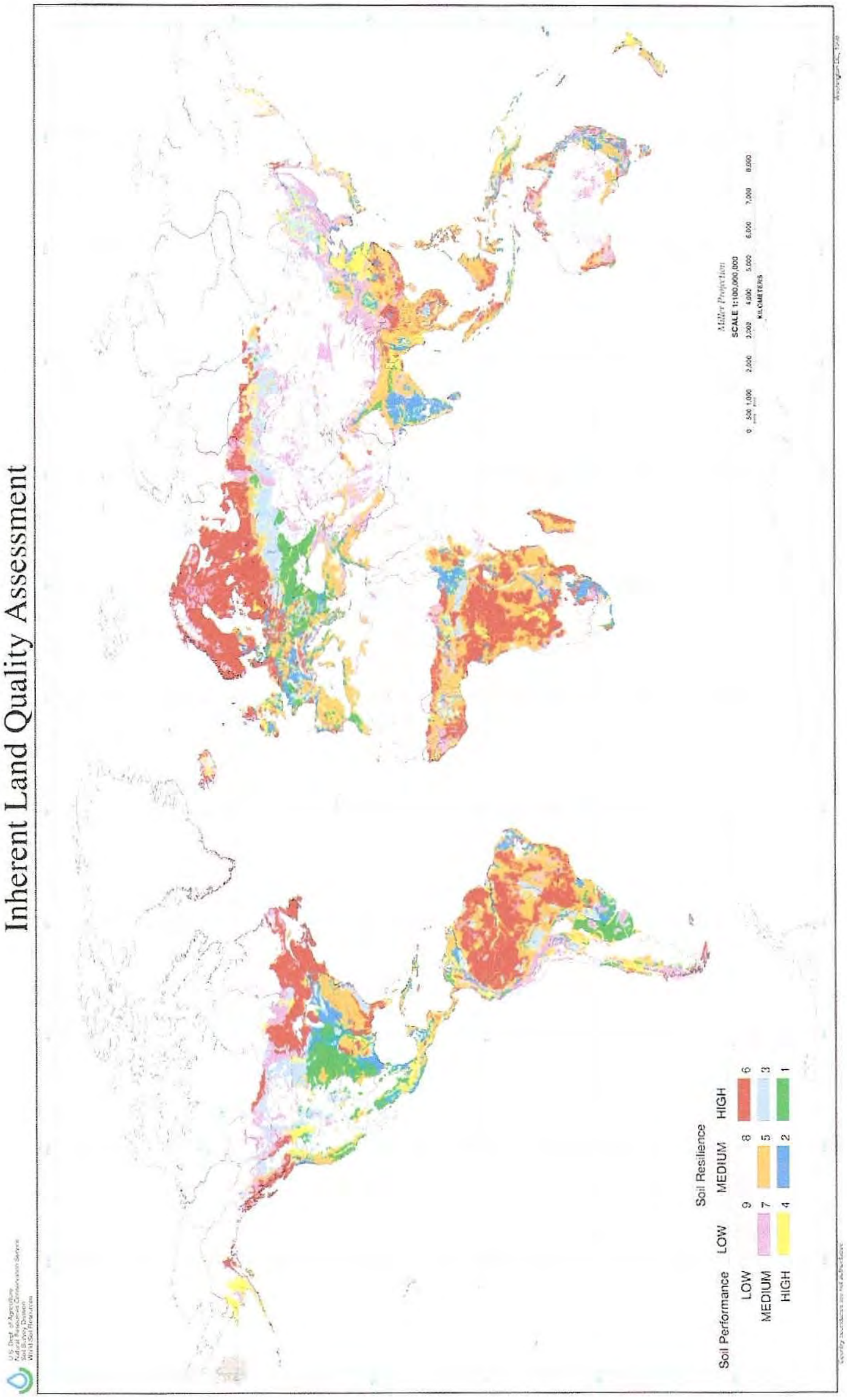
For this reason this report will cover the processes that might be used in Ukraine to facilitate SMP access to credit, but without exempting SMP's in Ukraine from universally accepted principles of credit or internationally accepted methods of underwriting. If such exemptions for SMP's in Ukraine were made, or even suggested that they should be made, this report will be largely useless.

<u>The Importance of the Need for Less Credit</u> - It is important not to loss sight of the fact that "Access to Credit" also means the ability to use LESS credit to achieve the same outcome. The more efficient and well managed an SMP is, all other things being equal, the greater the cash flow and the less demand that SMP will have for outside credit. Efficiency across SMP's improves access to credit for all SMP's.

It is also important to recognize that the more farm-gate prices are artificially reduced, by public policy such as export taxes and/or export quotas, and other factors, the less cash flow will accrue to SMP's which, in turn, limits the ability of SMP's to operate without external borrowings. In a country like Ukraine, with an inefficient system of allocating credit across its entire economy, the GOU must pursue policies that allow farmers to obtain the highest price for their products, in order to make sure that the supply of credit is efficiently allocated toward SMP's.

<u>Focus on the Farm</u> - Without attempting to understand the activities and finances of individual farms it is difficult, if not impossible, to make an assessment on the ability of farms to access financial services, including credit. Therefore a substantial amount of this report is devoted to attempting to understand the operations of individual farms, and using this understanding to make broader assumptions about the ability of SMP's to access credit, as well as the constraints they face in doing so. This effort was largely the result of field trips made by members of the team, where over 35 farmers were interviewed and data gathered.

World Soil Map



Source: Natural Resource Conservation Service, USDA

SECTION 2.0
SPECIFIC CONCLUSIONS AND DISCUSSION

2.1. Estimated Annual Unmet Demand for Credit for SMP's in Ukraine is Over $7.2 Billion – As will be shown in Tables 3 through 11 in Section 4.1 of this report, "Determining Unmet Demand for Credit," the total estimated annual unmet demand for credit for SMP's in Ukraine is approximately $7.291 Billion. Total capital needs, including unmet demand and an estimate on long-term capital, is $ 30.454 Billion. Needs are broken down as follows:

- Short-term credit (less than 12 months) consisting of both pre-harvest and post-harvest financing
- Medium-term credit (13 months – 60 months), consisting primarily, although not exclusively, of unmet demand for new agricultural equipment
- Long-term credit (more than 60 months) consisting primarily of mortgage financing assuming lifting of the moratorium on the sale and mortgaging of agricultural land ("the moratorium")

Based on these assumptions estimated unmet demand for credit among SMP's in Ukraine consists of the following:

- Short-term credit (pre & post-harvest financing)
    - Total working capital requirement – $5.213 Billion
    - Unmet demand for short-term credit (50% loan to value ratio[12]) – $ 2.607 Billion.
- Medium-term credit (primarily equipment financing)
    - Total capital need – $14.560 Billion
    - Total unmet demand for credit (70% loan-to-value ratio) - $10.192 Billion
    - Estimated annual medium-term credit extensions - $2.548 Billion (Est. 25% of total)
- Long-term credit (primarily mortgage financing)
    - Total estimated farmland value (see analysis on Page 18 of this report) – $21.362 billion
    - Unmet demand (est. 50% loan-to-value ratio) - $10.681 Billion
    - Estimated annual long-term credit extensions - $2.136 Billion (Est. 20% of total)

A detailed analysis on how these numbers were derived is found in Section 4.0, "Assessing SMP Demand for Credit," and illustrated in Tables 3 through 11. In addition to the method shown in Section 4.0, which was a bottom-up approach starting with assumptions about individual farms, we also used a "top-down" approach starting with national statistics. The purpose was to make sure that the numbers derived from the "bottom up" approach were reasonable. In fact the numbers derived from both methods ended up being substantially the same.

Among other things, estimating the unmet demand for credit requires making an assumption of what suppliers of credit are willing to lend, against assets that are either financed or pledged as collateral. There is not a single supplier of credit who will lend 100% of the total value of assets or collateral, whether actual value or appraised value. For purposes of this report, based on interviews and other factors, it is estimated that suppliers of credit in Ukraine will extend credit based on the following loan-to-value ratios:

- Short-term credit – 50% of the total amount required, with the borrower providing the balance
- Medium-term credit – 70% of the total amount required, with a down payment required for the remaining 30%
- Long-term credit – 50% of the appraised value of the land ("loan to value" ratio)

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[12] "Loan-to-value ratio" is the percentage that a lender will lend against certain collateral, whether it be warehouse receipts, equipment, land, or a combination. For purposes of this report the loan-to-value ratio for short-term credits is 50%, for equipment 70% and for land 50%.

For long term credit in the US and other Western countries the value of real property is normally equal to what a willing buyer would pay to a willing seller. In Western markets the loan-to-value ratio for long-term mortgage financing for farmland is usually 70%. In Ukraine we have estimated the loan-to-value ratio for farmland at 50%. As we will see later in this report, placing a value on agricultural land in Ukraine is very subjective, and will likely continue to be for some time after the moratorium is lifted.

2.2. There appears to be a "funding gap," consisting of farms between 100 and 1,000 Has.

Based on meetings held in connection with the preparation of this report, and other information, credit unions are currently active in financing SMP's up to 100 Has., provided that the borrower is a "natural person" (currently, credit unions in Ukraine cannot lend to legal entities). Farms over 1,000 Has. with acceptable credit are covered by value chain participants, supplying pre-harvest financing, and some buyers and traders, providing post-harvest financing and, to some extent, national and regional banks.

According to GOU statistics there are approximately 10,150 farms in Ukraine between 100 and 1,000 Has.[13]

2.3. SMP's can likely generate a significant amount of their working capital needs through internally-generated funds, without additional capital investment, PROVIDED that they improve farm management.

Table 9, in Section 4.1, shows the gross margin of a hypothetical 1,750 Ha. SMP. Even before accounting crop losses due to unreliable equipment, there are very little internally-generated funds to cover down payments for inputs for the next crop cycle, and other requirements, not to mention fixed costs such as land lease payments and other requirements such as equipment maintenance. It is unlikely that SMP's conforming even moderately to what is shown in Table 9 can obtain credit from any reputable supplier of credit.

It is important to note that the conclusions about SMP cash flow drawn from Table 9 have been corroborated by interviews completed in connection with the preparation of this report, with several experts with long experience in Ukraine agriculture, both as advisors and working for value chain participants. They all cite insufficient cash flow as the major barriers faced by most SMP's in obtaining credit.

In addition these experts pointed out that there are many smaller farms in Ukraine, of a size approximately 1,000 Has. that with proper management techniques can generate revenues approaching $1,000/Ha., even without substantial investment in modern farm equipment. The question then becomes, if these farms demonstrate that it is possible for SMP's in Ukraine to operate efficiently by international standards, and compete with agro-holdings, why can't all SMP's in Ukraine be capable of doing the same?

Even before considering improvements such as acquiring more efficient equipment, SMP's can likely improve cash flow simply by adopting efficient farming techniques, such as low-profile tilling, better seeding patterns, and other programs that can serve to improve cash flow without the need for making major capital investments.

2.4. Although banks and other financial institutions are interested in the possibility of providing credit to SMP's and addressing the unmet demand for credit, they will have limited ability to do so in the short-run, defined for purposes of this report as the next 3 years.

Banks in Ukraine are currently recovering from the financial crisis. They have limited liquidity and do not show levels of return on assets or return on equity normally exhibited by banks able to substantially expand lending activity, as shown in Tables 13 and 14 in Section 5.2 "Current SMP Activity by Suppliers of Credit – Examples of Farms."[14] Aside from poor

[13] 2009 Statistics Yearbook – Ukrainian Agriculture, Published by the State Statistics Committee
[14] Web Site of the National Bank of Ukraine

profitability, the reasons for the limited ability of banks and other financial institutions to addressing the unmet demand include:

All types of financings:

- Difficulty in meeting National Bank of Ukraine collateral requirements for commercial loans.
- Substantial losses in FYE 2010 and 2009 among banks limiting their lending ability to all but the strongest credits. Tables 13 and 14 show that the return on assets and return on equity for "Tier 1" and selected "Tier 2" Ukrainian banks as of April 1, 2011 is extremely poor by any internationally recognized measure of profitability.
- Lack of ability of loan officers, even within national banks[15] focusing on agricultural lending, to effectively evaluate agricultural credits in Ukraine. Without such ability it is almost impossible for national banks to underwrite and make informed credit decisions on SMP loan applications.
- For national banks, limited loan officer coverage and credit authority at the branch level. It will take national banks in Ukraine time and money to restore lending authority at the branch level, comparable to what existed in 2008 prior to the financial crisis, as well as staff branches with loan officers who have expertise in underwriting agricultural credits
- As stated earlier, there is a very limited likelihood that banks, especially national banks with other demands on their availability of lendable funds, will begin to target SMP's for additional extension of credit, until such time as SMP's become a significant source of deposits and retail income (payment processing, etc.)

As stated earlier all banks are intermediaries. They make money off of taking deposits and earning fees from retail services, and lending it out to their borrowers. It is extremely difficult, if not impossible, to induce a bank to target a market such as Ukrainian SMP's for additional credit, without first developing a deposit and retail banking relationship with that same market. This is one reason, among a number of reasons, why regional banks are more likely going to target SMP lending. They are closer to their borrowers and are thus more likely to have an existing deposit and retail base among SMP's.

Short-term financings -

Items above, plus:

- Underwriting difficulties, including but not limited to the need to often credit-approve more than 1 entity for the same financing. For example, if a warehouse receipt is used as collateral for post-harvest financing, in the absence of either a GOU indemnity fund and/or adequate insurance assuring prompt repayment of claims, a supplier of credit must credit-approve 2 entities, the borrower as well as the licensed warehouse issuing the warehouse receipt.
- Uncertainty over prices paid for output, resulting primarily from most SMP's operating exclusively on a cash basis as well as export taxes and quotas that serve to suppress farm gate prices.

The two items listed above are a combination of institutional AND policy constraints, a lender having to credit-approve two entities as a result of the policy gap emanating from the lack of a GOU indemnity fund being one example.

Medium-term financings -

Items applying to all financings, plus:

- Limited ability for SMP's to show adequate historical cash flow sufficient to repay an equipment finance obligation

[15] The term "national bank" is used throughout this Report to refer to banks operating throughout Ukraine, as opposed to regional banks that operate only in one region.

- Limited ability, or unwillingness, of suppliers of medium-term credit to consider the efficiencies of new farm equipment as a source of repayment
- Limited asset-liability matching, resulting from low level of time deposits (deposits of over 12 months in duration) in Ukrainian banks available to fund leases and other medium-term loans
- Limited ability to hedge medium-term foreign exchange rate risk.

As with short-term financing, the constraints are a combination of institutional and regulatory constraints, but without the first condition being satisfied, documented historical cash flow adequate for repayment of a debt obligations, the second condition will only improve the chances of those SMP's who do have adequate historical cash flow to obtain credit.

Long-term financings –

Items applying to all financings, plus

- Uncertainty of the terms of the Draft Law on Land Markets and the Draft Law on Land Cadastre, both of which will govern the lifting of the land moratorium
- Uncertainty over the ability of farmers to obtain clear and marketable Title to their property once the moratorium ends.

The above are both policy constraints. However it is doubtful that a lender will extend mortgage credit to an SMP, without the SMP showing documented ability to repay. Even if both the policy constraints are adequately addressed the credit constraint remains. It is extremely unlikely that any bank in Ukraine is going to choose to be simply a collateral lender, lending only against the value of the collateral, whether it be land or equipment. Banks are going to want to see the ability to repay, AND have security interest in collateral as a secondary repayment source. It is highly doubtful that the NBU would even allow banks in extensive collateral lending, and rightly so.

As mentioned earlier there are now indications that the NBU will allow Ukrainian banks to engage in swap agreements. In addition the Draft Law on Derivatives may allow for the establishment of commodity and financial futures markets in Ukraine. Either development would substantially improve the climate for Ukrainian banks to engage in lending to SMP's. A further positive development is the recent reduction in NBU reserve requirements for lending to agriculture. However, as with the other policy developments, none of this will really matter unless SMP's improve documented cash flow.

2.5. Regional banks may be a key to increasing the volume of bank lending to SMP's

In the short to medium term is quite possible that regional banks may be a better focus than national banks, when it comes to increasing the volume of SMP lending. The evidence includes:

- The work of the Ukraine Micro Lending Program (UMLP), which has focused primarily on regional banks. The banks currently cooperating with UMLP have approximately 416 SMP loans on their books, totaling approximately $5 million (average loan size of $12,000.00).
- It is likely that the regional banks might have more underwriting expertise for agricultural credits than do local branches of national banks
- With regional banks lending decisions are likely made closer to the borrower, than is the case with national banks.
- It is more likely that regional banks have existing deposit and retail relationships with SMP's making them more likely to consider extending loans to SMP's in their market areas.

2.6. In the short-term, input suppliers are the best placed to provide short-term credit to SMP's, especially for pre-harvest financing.

Input suppliers are defined as suppliers of fertilizers, chemicals, seeds, and other inputs required for growing crops. For purposes of this report, suppliers of machinery are included as input suppliers, especially if they are either potential suppliers of inputs and spare parts, as most of them are, or are willing to take commodities as a form of repayment. The reasons why input suppliers are best placed to provide short-term credit to SMP's are as follows:

- Input suppliers possess the most extensive information on the activities of SMP's, and are thus in a much better position to render credit decisions on SMP's than are banks, especially national banks, and other financial institutions.
- Input suppliers are likely better placed obtain standby credits from banks (Bayer AG getting a standby loan from Raiffeisen and IFC to allow it to offer input financing), and use that credit availability to provide supplier credit to SMP's.
- Input suppliers are not under NBU regulation and supervision, and thus do not have the collateral restrictions, and other lending restrictions, that apply to deposit-taking institutions.
- In most cases the sales representatives employed by input suppliers understand the importance of explaining the benefits of their product to their customers, often to a greater degree than bank lending officers understand the economic benefits of their products.

Suppliers who exclusively sell machinery will have difficulty in supplying credit to SMP's for the following reasons:

- Limited dealer financing available in Ukraine
- Limited manufacturer credit available to Ukrainian equipment distributors and dealers

As will be seen later in this report manufacturers of smaller types of farm equipment ideal for smaller SMP's, especially Chinese manufacturers, are offering credit to their customers via their dealer networks.

As was stated in Conclusion No. 2, above, major input suppliers like Bayer are not as active in working with farms of below 1,000 Has. (a commercial vegetable farm being a likely exception), and almost completely inactive on farms less than 100 Has.

<u>2.7. For short-term credit, there has been substantial progress in developing GOU regulatory and policy support for improving SMP access to credit, but substantial gaps still remain.</u>

The gaps include:

- Warehouse receipts (collateral for post-harvest financing) – Standardized documentation and online registration exists, but there is no indemnity fund covering losses at the warehouse, and no linkage between the online registration system and the registration system maintained by the Ministry of Justice.
- CPR's (Cedula de Producto Brazil) for pre-harvest financing – Being introduced in Ukraine by Bayer AG and others, but their use is limited by willingness of input suppliers to use CPR's, minimal standby credit financing from banks, and lack of standardized documentation that may be required for automated registration. In addition, under Ukrainian Law and unlike Brazil, input suppliers may not have authority to repossess assets pledged under CPR's, without a Court order.
- Hedging foreign exchange risk (banks) – As stated earlier the NBU has recently indicated that they are considering allowing banks to enter into swap agreements. Swaps, along with development of derivative and futures markets, can help banks in addressing foreign exchange risks and thus allow them to extend more credit in Hyrvna.

2.8. The inability of most SMP's to document adequate cash flow notwithstanding, there continues to be significant regulatory and policy constraints that further limit SMP's access to credit, even for SMP's who have documented cash flow.

These constraints include:

- Uncertainty over the exact terms of the Draft Law on Land Markets and the Draft Law on Land Cadastre, both laws being required for removal of the moratorium.
- Whether or not SMP's will be able to obtain clear and marketable Title to their land under the terms of the Draft Law on Land Cadastre.
- Whether or not the Government of Ukraine will create a State Land Fund, whose mission would be to purchase, sell and lease farmland once the moratorium is lifted, and will thus likely create a distortion in the market for farmland[16].
- Whether or not the Government of Ukraine will establish a State-owned insurance company, which will likely distort the private market for agricultural insurance and create uncertainty among market participants on timely payment of claims.
- Existing Government of Ukraine agricultural support programs distorting the market and often leading to farmers making the wrong decisions simply to access the programs, and/or with agro-holdings as the primary beneficiaries including but not limited to the interest rate subsidy, UkrAgroLeasing and GOU rebates for the acquisition of new farming equipment.
    - Interest rate subsidy – Qualifications unclear, the subsidy has to be appropriated on an annual basis limiting its usefulness, and the subsidy is only available for bank lending. In 2011 virtually all transactions involving interest rate subsidies have been extended to agro-holdings.
    - UkrAgroLeasing ("UAL") – UAL obtains money from the State Budget at zero cost and uses the funds to lease equipment to farming operators. UAL is confined to financing equipment with substantial Ukrainian content. UAL likely has large operational losses, including a high rate of non-performing leases. The combination of high operating losses and reliance on the State Budget for lendable funds represents a double drain on the State Treasury.
    - Substantially all rebates for acquisition of new equipment offered by the GOU goes to agro-holdings.
- Export quotas and/or export taxes and tax regimes (export taxes on grain have recently replaced export quotas), as well as VAT on exports that together or separately serve to reduce the farm-gate price paid to all farmers for grain, thus increasing their credit requirements by reducing their available cash flow.
- Export quotas and/or export taxes also serve to reduce the possibility of post-harvest financing covering commodities, such as grain, subject to the quotas. Without the ability to export freely there is a limited market for the asset being financed and therefore reluctance on the part of the value chain participant to extend production financing.

2.9. Credit Unions represent a potentially significant source of credit for the smallest SMP's (under 100 Has.), especially for short-term credit

A recent report prepared for KfW Bankengruppe[17] stated that the financial crisis has served to eliminate all but the strongest credit unions, which many of the remaining institutions are concentrated in rural areas of Ukraine, and there is now an association of credit unions, called PZV, with strong eligibility and prudential requirements as well as with deposit insurance. Credit unions and PZV, especially if combined with practices followed by organizations such as the Farm Credit System in the US, may now serve as a viable platform for offering access to credit for the smallest SMP's, especially if sources of lendable medium-term funds for credit unions, now minimal, can be expanded. A more detailed discussion of the current activities of

[16] Report – "Considerations on the Lifting of the Moratorium on Sale of Agricultural Land in Ukraine," April, 2011, Deena Ledger and Robert Mitchell, Landesa, prepared for the USAID/ Chemonics LINC Project

[17] Report – "Credit Unions in Ukraine after the Financial Crisis – Actual Situation and Development Prospects," Dec. 2010, prepared for KfW Bankengruppe

credit unions can be found in Section 5.2 of this Report, entitled "Current SMP Activity by Suppliers of Credit – Examples of Farms."

2.10. Without new approaches toward extending medium-term credit for SMP's in Ukraine it is extremely unlikely that most SMP's will be able to benefit from newer, more efficient, agricultural equipment

In 2008 approximately $1.4 billion of new agricultural equipment was imported into Ukraine. It is a reasonable assumption that substantially all of this new equipment was acquired by agro-holdings. Since virtually all of the new imported equipment has been acquired by agro-holdings it is also reasonable to assume that most SMP's employ old, inefficient Soviet-made equipment. There have been estimates made, by IFC and others, that the average age of farm equipment in Ukraine is over 14 years-old. Furthermore, it is reasonable to assume that there is not a single SMP in Ukraine, certainly those of 1,000 Has. or greater (with the possible exception of commercial vegetable operations) who can establish sufficient historical cash flow required to finance new equipment, equipment which will likely cost at least $700/hectare (conservative estimate).

Therefore in addition to SMP's improving their cash flow through better management, as has been discussed, without new arrangements for extending medium-term credit to SMP's for the acquisition of equipment, on a basis consistent with proper internationally-recognized credit and underwriting principles, SMP's will not be able to utilize their land at the maximum level of productivity. Without both these conditions being satisfied, the value of farmland in Ukraine may continue to be a fraction of the value of similar land in Iowa.

2.11. There is an increasingly broad range of equipment suppliers coming into the Ukrainian market, including from other CIS countries, China and India, that may provide improved efficiencies for SMP's, especially smaller SMP's, at much less cost compared to European and US equipment suppliers.

There are now small tractors available in Ukraine, costing $2,000.00 to $5,000.00 that would be ideal for use by smaller SMP's (100 Has. or less). 3-4 years ago, such equipment was not available in Ukraine. The presence of this equipment has the potential to vastly improve the productivity of the smallest SMP's assuming, of course, that the SMP's can afford to acquire such equipment.

2.12. There exists a lack of understanding among SMP's of the benefits of credit in their businesses, even at interest rates that might be considered by some to be excessive and, concurrently, a lack of ability, primarily on the part of banks, to explain the economic benefits of their lending products to prospective customers.

As is explained throughout this report the most important considerations for access to credit are as follows:

- Cash Flow – Without documented cash flow and liquidity SMP's will continue to have difficulty obtaining credit, even with the best policy environment and highly liquid suppliers of credit.

- Availability - Without availability, the price of credit, expressed as a rate of interest, is moot. As discussed earlier if a potential borrower does not know how to efficiently use credit in his or her business, and/or a potential supplier of credit does not know how to explain the economic benefits of a credit product to a prospective borrower, it is just as much a barrier to access to credit as the institutional, regulatory and policy barriers discussed in this report.

A more detailed discussion of this issue can be found in Section 3.7 of this Report.

2.13. Potentially significant social issues should be considered

Potentially significant social issues could include, but may not be limited to:

- Owners and operators of SMP's are getting increasingly older, with children unlikely being interested in taking over the farming operation.
- The end of the moratorium, and the introduction of modern processes for valuing farmland, may result in substantial variations in farm value for farms in one District, possibly leading to envy and other social problems.

It is going to be difficult for an older farm owner in Ukraine to qualify for either medium or long-term credit. This is also true in the US, and other Western countries. The reason is that if the owner dies there is likely no way that the lender can act on his collateral.

There is limited use of life insurance in Ukraine, especially "key-man" insurance which pays beneficiaries, including a lender, upon the death of the insured. If a farm is owned by 2 or more people there is limited use of "buy-sell" agreements, arrangements backed by life insurance that allows the beneficiary to buy out the interest of the deceased partner from his/her heirs.

SECTION 3.0
RECOMMENDATIONS & DISCUSSION OF RECOMMENDATIONS

As mentioned throughout this report without improved management, manifesting itself in improved SMP cash flow and liquidity, it is going to be very difficult for SMP's to obtain credit from any supplier of credit, regardless of the quality of the policy and regulatory framework. This report includes institutional and policy recommendations that will hopefully not only lead to improved farm management, but also improve the flow of credit to SMP's generally, including:

3.1. Assist the GOU in removing regulatory and policy gaps that will allow more extensive use of CPR's, as a short-term lending instrument, and Warehouse Receipts, as good collateral for short-term post-harvest financing.

Objectives –

- Warehouse receipts can be more extensively used as collateral for short-term post-harvest financing.
- Broaden the use of CPR's, especially by SMP's.

In addition to State authorities the Project should work with input suppliers, including but not limited to:

- Bayer AG, who has received a $140 million standby credit facility from Raiffeisen/Aval Bank and IFC, and plans to extend supplier credits to up to 1,000 farming operations in the 2012 crop year.
- AMACO, a company selling both inputs and farm equipment manufactured by Agco and other US manufacturers, who are planning to extend input credits to farmers and take payment in commodities for sale to customers mostly in the Middle East.

One example of possible cooperation with input suppliers would be for AgroInvest to participate in the seminars that Bayer stated that they are planning to put on for existing and potential customers, where the AgroInvest could make presentations on subjects including improved financial record keeping, dealing with buyers to insure full payment for output, suggestions for improved farm management, etc.

3.2. Advise the GOU to remove uncertainties relating to the terms of the Draft Law on Land Markets and the Draft Law on Land Cadastre

Objectives/Conditions –

- Improve clarity on the rules governing the market for agricultural land once the moratorium is lifted, included in the Draft Law on Land Markets.
- Review plans put forward by the GOU to create an agricultural land fund, with the objective of making sure that such a fund, if created, does not distort a free and transparent market in Ukraine after the moratorium is lifted.
- Include specific terms in the Law on Land Cadastre designed to insure that SMP's obtain clear and marketable land Titles.

Until all of the above 3 conditions are met, clear rules governing the market, a transparent land market, and the ability of SMP's to obtain clear and marketable Title, it might well be appropriate to recommend to the GOU that they delay the lifting of the moratorium until such time as all 3 conditions are met.

3.3. In cooperation with other USAID Technical Assistance Projects, as well as IFC and other donor projects, improve existing regulatory and policy conditions restricting SMP access to credit.

Objectives –

- The development of swap, derivative and futures markets in Ukraine (with FINREP)
- Allow "self-help" repossession for CPR contracts similar to conditions in Brazil (AMDI and CLC)
- Allow discounting of all existing business obligations (AMDI, CLC, NBU & NBFR)
- Allow for a free private market for agricultural insurance (with FINREP, IFC Ag Insurance Project and the private sector)
- Limit market distorting effects of existing Government programs (interest rate subsidy and UkrAgroLeasing), by making the interest rate subsidy available to all lenders and not just banks, change the formula for computing the subsidy so as to increase the number of loans that qualify for the subsidy, and closing down UkrAgroLeasing.

3.4. Advise the GOU to focus existing agricultural support programs toward SMP's

As will be shown later in this report virtually all of the GOU's existing agricultural support programs, which are budged for UAH 10.2 billion ($1.28 billion) in 2011, are now being utilized by agro-holdings who, most likely, do not need the support. Some of these programs, including the interest rate subsidy, will make a far greater difference to SMP's than they would toward agro-holdings. With its current fiscal situation the GOU can ill afford to expand agricultural support programs, but it is possible to make these programs work better for SMP's and, with very little effort on the GOU's part, make the subsidy easier for SMP's to obtain.

A more detailed discussions of the GOU's current agricultural support programs can be found in Section 4.2 of this Report, entitled "Existing GOU Programs Designed to Improve SMP Access to Credit."

With respect to Recommendations Nos. 1 through 4 above, the objective is removal of policy and regulatory barriers to access to credit for SMP's and to re-focus existing support programs toward SMP's, rather than recommending increases in GOU budget allocations, in the form of interest rate subsidies, rebates for new equipment acquisitions. In addition none of the above recommendations include new laws or new regulations.

If the barriers listed in Recommendations Nos. 1 through 4 are removed then it will become easier for credit to flow to and within the agricultural economy, and for SMP's with documented cash flow to acquire capital to operate their businesses efficiently. This would almost certainly result in a net revenue gain to the GOU.

<u>3.5. Develop sub-regional pilot projects as a basis for working with banks, credit unions and other suppliers of credit including value chain participants, to develop improved credit and underwriting templates for extending credit to SMP's, help address the "funding gap" described in Conclusion No. 2.2 above, developing new means of extending credit, especially for equipment financing, and offering new depository and retail products necessary for the sustained growth in the supply of credit to SMP's</u>

Sub-regional pilot projects could be an effective vehicle for channeling improved management techniques to SMP's, improving their cash flow and liquidity and the probability that they could qualify for credit, and could be used as a platform for banks to be able to test new underwriting techniques and lending products that would result in increased bank involvement with SMP lending.

Pilot projects may also allow for increased cooperation between banks and input suppliers, to coordinate lending and other support programs. It would also allow the project to work with input suppliers, such as Bayer, to offer seminars which would include techniques leading to better farm management.

Sub-regional pilot projects should be raion-based, preferably in raions with limited presence of agro-holdings. There would be perhaps 3 such pilot projects, in Central Ukraine possibly in Rushin, Zhytomyr where the project team visited in connection with the preparation of this report, in Southern or Eastern Ukraine or in Crimea, and in Western Ukraine. The first 2 would be with banks, one a national bank and another with a regional bank, and the third, in Western of Southern Ukraine, would be with one or more credit unions.

The objectives of the 2 pilot projects developed in conjunction with national and regional banks would be the following:

- Develop and test templates designed to better evaluate SMP credits in the Ukrainian context, especially SMP's between 100 and 1,000 Has. (the "funding gap").
- Develop and test new lending products, especially lending products designed for SMP's of 1,000 Has. and below.
- Consider different types of transaction structures designed to improve access to credit for equipment financing.
- Consider a variety of depository and retail relationships with SMP's.

With regard to new approaches to equipment financing one such possibility would be to work with "tractor stations," entities in which several SMP's are members, which would give SMP's access to farm equipment owned and operated by the stations. Such tractor stations already exist in Ukraine, largely on an informal basis as is the case in Rushin for example. A similar approach might be taken with the equipment financing needs of commercial vegetable and fruit farmers, where they need improved refrigeration equipment, storage, and packaging lines.

These informal arrangements might be used as a basis for setting up an entity that could act as a management company and a borrower, hopefully resulting in SMP's acquiring use of modern equipment that they could never acquire individually. Such an entity would, of course, have to be established consistent with internationally accepted best practices in corporate governance, with particular attention paid to internationally accepted credit policies.

The third sub-regional pilot project would focus on expanding the reach of credit unions, especially if the Draft Law is enacted that would allow credit unions to lend to legal entities. One possibility would be to use this sub-regional pilot project to design a network of credit unions focused on the small SMP market, along the lines of the Farm Credit System in the US which is one of the most successful government-run farm credit organizations in the world. However, instead of the GOU being directly involved, as is the case with the US Dept. of

Agriculture which runs the Farm Credit System in the US, in Ukraine the local counterpart might be PZV, considered to be the most effective association of credit unions in Ukraine.[18]

An effort should also be made to link credit unions with value chain participants who have made significant investments to provide smaller SMP's with inputs and equipment that they can utilize in their operations. One such example is Kyiv Atlantic Ukraine (KAU), a partly American-owned company, who has spent approximately $1.5 million over the past 1-2 years to open chain of stores throughout Ukraine, supplying small SMP's with poultry and livestock feed, chicks, and farm implements.

According to KAU their stores do not currently offer its customers any credit. Perhaps in collaboration with a credit union KAU can offer financing, either directly to the credit union or on its own via a "private label" program where the credit union provides all the funding and credit support but with KAU's documentation. As a direct result of an intervention by AgroInvest discussions in this regard, between PZV and KAU, may have already commenced.

A focus of one the sub-regional pilot projects should be to expand purchase order financing for suppliers of vegetables, fruits and berries from the buyers, where some purchase order financing currently exists (Chumak supplying purchase order financing to their suppliers of tomatoes), to banks and, especially, to Non-Bank Financial Institutions (NBFI's). In this way purchase order financing can become more institutionalized and more readily available to qualified suppliers. Fozzy and Metro Cash & Carry, to name one existing and one potential buyer of produce from Ukrainian farms, respectively, are well placed to serve as credit support for expanding purchase order financing to banks and NBFI's. Proper purchase order financing is as much about lending against the receivable, Fozzy for example, as it is lending to the borrower (a supplier to Fozzy). This could be one possible use of a USAID DCA.

3.6. In conjunction with suppliers of smaller types of farm equipment, and perhaps in conjunction with the sub-regional pilot projects, develop "centers of excellence," where the objective is to increase productivity of smaller SMP's (1-100 Has)

As stated earlier, over the last 3-4 years a number of suppliers of farm equipment have appeared on the Ukrainian market, suppliers from China, India and elsewhere. Some of these companies already offer customers financing through their dealer network. Centers of excellence, perhaps linking suppliers of smaller equipment with credit unions, along with other input suppliers, will improve individual incomes in rural raions as well as employment prospects for its residents.

3.7. Develop programs to assist SMP's in better understanding how to use credit in their operations and, concurrently, develop programs to help suppliers of credit, especially banks and other depository institutions, better explain the economic benefits of their products to their prospective customers

These programs could be developed in conjunction with the establishment of the sub-regional pilot projects (Recommendation No. 3.5, above). The twin objectives would be:

- Show SMP's different ways to effectively use credit in their business
- Provide lending officers better ways of marketing and selling their products to SMP's.

While the first suggestion, above, may be outside the purview of AgroInvest, the 2nd certainly is within AgroInvest's purview and would indirectly serve to address the first suggestion.

As stated elsewhere in this report, the inability of SMP's, especially SMP's that do have adequate documented cash flow sufficient to qualify for additional credit, to effectively use credit in their operations, combined with the inability of lending officers to explain the benefits of their products, is just as significant a barrier for access to credit as any of the policy, regulatory and institutional barriers discussed in this paper.

[18] KfW Report

During field work a number of Ukrainian farmers, and others, said that in their opinion paying 20% interest was a form of extortion. In practice this assessment is likely untrue, as shown by examples using different lending terms.

Short-term Lending – As an example consider a common practice in the US, of input suppliers offering a business a 2% discount if he pays within 10 days ("2%/net 30"). In effect, what the supplier is telling his customer that he is willing to "pay" 36.67% per annum for his customer's cash. In this example it makes sense for the customer in this example to borrow at 20%, in order to take the 2% discount.

More applicable in Ukraine, as well as the US and other Western countries, would be the ability to use borrowed money to make bulk purchases of inputs with a substantially reduced unit price. If a farmer can buy inputs in bulk at a substantial discount per unit, then it would likely make sense for a farmer to borrow money at rates of 20% or more, in order to use that money to make bulk purchases where the discount might well be over 40%.

Medium-Term Lending – In Ukraine lending officers must consider a broader range of sources of repayment, especially when underwriting a medium-term obligation such as an equipment lease. In underwriting these sources of repayment are considered as "secondary sources of repayment," with historical cash flow considered as the "primary source of repayment."

John Deere/Ukraine has estimated that farmers in Ukraine experience an annual 30% crop loss due to equipment breakdowns.[19] For some crops, such as wheat, the losses are likely less than 30%; for others, such as vegetables, the losses are greater. For an SMP with an annual turnover of $500,000.00, losses due to outdated and/or unreliable equipment, would amount to $45,000.00 based on John Deer/Ukraine's 30% estimate.

If this same SMP were to lease new farm equipment costing $100,000.00, and assuming a 3 year lease with a 30% down payment and an implicit cost of money of on the lease of 30% (in leases the interest rate is not disclosed), monthly payments would be $2,899.00, or $34,789.00 per year.

This hypothetical lease transaction would net the SMP $10,210.00/year, equal to foregone crop losses of $45,000.00 less the annual lease payments. This analysis does not include improved efficiencies of the new machine, such as lower fuel consumption, lower direct labor, faster work in the field, etc., which would improve the economics of this transaction even further. However, given the attitude expressed by many SMP's during the field work, that paying 30% interest is extortion, most of them would not enter into this hypothetical lease, even though the SMP is netting well over $10,000.00/year as a result of entering into this transaction.

It is worth remembering that however compelling efficiency is, as a source of repayment, it should always be considered a secondary source of repayment. The primary source of repayment should always be historical cash flow.

It is critical that lending officers need to be able to understand and explain the benefits of their products to prospective customers, and credit officers need to take into account the economic benefits, to the customer, of the asset being financed, especially the ability to use those benefits as a source of repayment. If an SMP has been in business a number of years, the use of existing machinery can be measured, and therefore the benefits of operating new machinery can therefore be derived with some accuracy.

Without this type of approach to underwriting medium-term transactions it will be extremely difficult for SMP's to acquire the type of modern equipment necessary to fully utilize the benefits of the rich soil in Ukraine and to compete with agro-holdings. In addition and as stated earlier, this limitation will serve to limit access to credit to SMP's just as surely as any other policy, regulatory or institutional constraint discussed in this report.

[19] Presentation of John Deere Ukraine at the 2011 International Conference on Leasing in Ukraine

However, it should be kept in mind that the first thing SMP's need to do is improve cash flow and liquidity. Without cash flow and liquidity it will be very difficult for SMP's in Ukraine to access credit on any systematic basis.

3.8. Work with the GOU to Encourage the Entrance of Large International Insurers and Reinsurers to enter the Ukrainian Market, with the Objective of Allowing Them to Offer Comprehensive Insurance Coverage to All Ukrainian Farmers, Including SMP's

Even if an SMP has adequate documented cash flow to qualify for additional borrowing, his ability to actually secure such a borrowing will be reduced if the SMP has limited, or no, insurance coverage, insuring against crop loss due to natural disaster, damage or loss of farming equipment and damage or loss of farm property due to natural disaster. Currently very few SMP's have such coverage, and those who do often have limited coverage. In addition a supplier of credit has to be satisfied that whatever insurance does exist, that the insurer not only has adequate capital but will be willing to pay claims on a timely basis.

There are currently large international insurers and reinsurers willing to enter the Ukrainian market, but are being deterred by expressed plans of the GOU to set up a State-owned insurance company with initial capital of $1 million. Even if the GOU has the capital available to establish such an entity, which is questionable, there is little confidence among market participants we spoke with in developing this Report that a State-owned insurer would have the expertise necessary to underwrite agricultural risk, or have the ability or willingness to promptly pay claims. For a more detailed discussion of the lack of agricultural insurance please go to Section 4.2, "Existing GOU Programs Designed to Improve SMP Access to Finance."

3.9. Work with the GOU, especially the Department of Agriculture to increase the employment opportunities in the farming regions of Ukraine, for graduates of Ukraine's agricultural colleges.

One of the GOU's biggest agricultural support programs, if not the biggest, is the money the GOU spends in educating students in Ukraine's agricultural college. However many people we spoke with, during preparation of this Report, say that either very few of these graduates are able to obtain gainful employment in farming regions of Ukraine, or they simply prefer to stay in Kyiv after graduating. Either way, unless these graduates are able to find careers in the farming regions of Ukraine the money that the GOU invests in these students is, to say the least, not being used effectively.

Ukraine has never really had a formal Government-run extension service with the ability to assist farmers in running their operations more efficiently, and it is very unlikely that the GOU will decide to launch an extension service in the future. Consequently, this type of advice will have to be offered by the entities on which this Report is focused, namely private sector suppliers of credit. If private sector suppliers of credit are going to succeed in this effort they will need people with knowledge of farming operations. The major source of this expertise is graduates of Ukraine's agricultural colleges.

The GOU recognizes this problem and is looking for ways to improve opportunities for graduates of Ukraine's agricultural colleges. AgroInvest is in a position to help facilitate the increase in employment opportunities in the farming regions of Ukraine for graduates of agricultural universities in a number of ways, including:

- If AgroInvest is going to meet or exceed USAID's goal of facilitating 10,000 new loans over the 5 year life of the project the suppliers of credit with which it will work, especially banks, will need new loan officers that have the ability to evaluate and underwrite agricultural credits.
- If credit unions are able to begin lending to legal entities, they will need additional loan officers with an agricultural background, capable of evaluating expanded loan activity among legal entities.

- If banks and NBFI's expand Purchase Order financing for commercial vegetable growers they will also need loan officers with
- Generally, assist the GOU in publicizing career opportunities for graduates of agricultural universities.

SECTION 4.0
ASSESSING DEMAND FOR CREDIT BY SMP'S

4.1 Determining Unmet Demand for Credit

At its basic level unmet demand for credit for SMP's is determined by the following:

- The amount of arable land used by SMP's
- What crops are grown on the arable land
- Internally-generated cash flow of SMP's

As discussed elsewhere in this report SMP's must have documented internally-generated cash flow, if they expect to obtain credit from reputable suppliers of credit on a regular basis.

Unmet demand for credit is determined by the collective decisions of the thousands of farms that make up the universe of SMP's in Ukraine. Thus when looking at demand for credit, this report starts with assumptions about the operations of individual SMP's, and uses those assumptions to derive an estimate of the demand for credit across all SMP's in Ukraine.

As part of the work for this paper we also derived estimated demand for credit by starting with national statistics, without starting from making assumptions about individual farms and without any interaction. The numbers derived from each approach ended up being very close, thus we are reasonably confident that the conclusions reached in this Section reasonably reflect the unmet demand for credit by SMP's.

Table 1 shows current data on the volume of arable land in Ukraine (000 Has.)

Table 1
Changes in Agricultural Land Use in Ukraine
1996 – 2010

TYPE OF LAND (Has.)	2010	2007	2005	2001	1996
Arable Land	32,478.4	32,446.2	32,482.2	32,563.6	33,286.2
Fallow Land	320.8	392.2	409.7	421.6	0.0
Pastures	5,489.7	5,515.7	5,530.1	5,521.3	5,303.2
Hay Fields	2,409.8	2,432.1	2 ,438.0	2,388.6	2,220.6
Perennials	897.7	898.7	903.8	931.9	1,042.9
TOTAL	41,596.4	41,684.9	41,763.8	41,827.0	41,852.9

Source: Center for Land Reform Policy in Ukraine (www.myland.com.ua)

As shown in Table 2, below, SMP's currently make up approximately 97.1% of the farms in Ukraine, including both private farms and agricultural enterprises, and take up approximately 46.3% of the land area. [20] Total land area included in SMP's is estimated to be 15,056,800 hectares.

According to current estimates approximately 25% of the total arable land in Ukraine is controlled by agro-holdings, leaving an additional 28.7% of the total arable land controlled by non agro-holdings not otherwise classified as SMP's, most likely farms between 3,000 and 10,000 Has.

[20] 2009 Statistics Yearbook – Ukrainian Agriculture, Published by the State Statistics Committee

Table 2
Estimated Arable Land Utilization by Farm Size

Farm Type	Approx. No. of Farms[21]	Percent of Farms	Approx. Land Area (000 Has)[22]	Percent of Land Area
Up to 50 Has.	26,540	55.5	1,279.7	3.9
51 – 100 Has.	4,174	8.7	618.9	1.9
101 – 500 Has.	8,298	17.4	2,872.9	8.8
501 – 3,000 Has.	7,405	15.5	10,285.3	31.7
3,000 Has. +	1,392	2.9	17,421.6	53.7*
TOTAL	47,809	100.0	32,478.4	100.0

- Includes agro-holdings. As stated earlier it is estimated that agro-holdings currently represent approximately 25% of the arable land in Ukraine. Therefore farms greater than 3,000 Has., not otherwise classified as agro-holdings, currently represent approximately 28.7% of the arable land in Ukraine.

Calculation of Unmet Demand – Short-Term Credit

Calculation of demand for short-term financing will include the following assumptions:

Grains, Oilseeds & Sugar Beets - For grains, oilseeds and sugar-beets an "average" farm of 1,750 Has. (Median of 501 and 3,000 Has.) will have a cropping pattern allocated as follows (From Table 3):

- Grains – 812 Has. (46.4%)
- Oilseeds – 625 Has. (35.8%)
- Sugar Beets – 313 Has. (17.8%)

Table 3 shows a detailed breakdown of the cropping pattern.

Table 3
Possible Cropping Pattern of a Larger SMP
Growing Grains, Oilseeds and Sugar-Beets
1,750 Has.[23]

Crop	Area Planted (Has.)	Pct.
Sunflowers	375	21.4
Wheat	281	16.1
Barley	281	16.1
Corn	250	14.3
Rapeseed	250	14.3
Sugar Beets	313	17.8
TOTAL	1,750	100.0

The cropping pattern shown in Table 3 was derived from conversations with individuals working for input suppliers with extensive experience servicing this type of farm.

Vegetables - Commercial Growing of vegetables take up approximately 3.2% of all the arable land area in Ukraine.[24] Assuming that commercial growing of vegetables takes

[21] Courtesy – LINC Project
[22] 2009 Statistics Yearbook – Ukrainian Agriculture
[23] Access to Credit Initiative for Ukraine & Moldova, 2006
[24] IFC Vegetable Supply Chain Project - Ukraine

place solely among SMP's on smaller plots, commercial vegetable growing would account for 1,039,308 Has., or 6.9% of the land area accounted for by SMP's.

Possible cropping pattern for a 100 Ha. commercial vegetable operation might look like the following:

Table 4
Possible Cropping Pattern of a Commercial
Vegetable Growing Operation
100 Has.

Crop	Area Planted (Has.)	Pct.
Tomatoes	20	20.0
Potatoes	30	30.0
Red Beets	30	30.0
Carrots	20	20.0
TOTAL	100	100.0

The cropping pattern shown on Table 4 is an educated guess, based partly on empirical observations.

Calculation of cost/hectare –

Cost/hectare for the larger SMP shown in Table 3, growing grains, oilseeds and sugar-beets, would look as follows:

Table 5
Cost Per Hectare, by Crop
Larger SMP (Fr. Table 3)

Crop	2009 Cost/Ha. (USD)[25]	Has. Planted (Fr. Table 3)	Total Cost - 2009 (USD)
Sunflowers	130.00	375	$ 48,750.00
Wheat	195.00	281	54,795.00
Barley	125.00	281	35,125.00
Corn	185.00	250	46,250.00
Rapeseed	120.00	250	30,000.00
Sugar Beets	515.00	313	161,195.00
TOTAL		1,750	$376,115.00

At a loan-to-value ratio of 50% the estimated demand for credit for a larger SMP with the cropping pattern described in Tables 4 and 5, would be $188,057.50, or UAH 1,495,057 ($1.00 = UAH 7.95).

The estimated cost per hectare for larger SMP's, on a weighted average basis, would be $214.63/ha. The weighted average is based on the cropping pattern shown in Table 3. At a loan-to-value ratio of 50% the demand for credit from larger SMP's would be $107.32/ha. From available information it appears that little, or none, of the total working capital requirements, as shown in Table 5, can be addressed by gross margin from operations as shown in Table 9.

[25] Direct Crop Input Costs for Small-Scale Agricultural Enterprises, Fig. A-6, Page 35, "Ukraine Grain Sector Review and Public Policy Dialogue," December, 2010, FAO Investment Centre/EBRD Cooperative Program

Cost per hectare for the 100 Ha. commercial vegetable operation, shown in Table 4, would look as follows:[26]

Table 6
Cost Per Hectare, by Crop
Commercial Vegetable Operation (Fr. Table 4)

Crop	Cost/Ha. (USD)	Has. Planted (Fr. Table 4)	Total Cost - 2009 (USD)
Tomatoes	4,023.40	20	$ 80,468.00
Potatoes	2,391.80	30	71,754.00
Red Beets	731.60	30	21,948.00
Carrots	1,904.00	20	38,080.00
TOTAL		100	$212,250.00

For vegetables the weighted average cost/hectare, for the entire farm, would be $2,122.50, with the weighted average computed on the basis of the cropping pattern shown in Table 4. At a loan-to-value ratio of 50% the demand for credit/ha. would be $1,061.25/Ha., for a commercial vegetable operation of 100 Has.

Calculation of total demand for Short-Term Credit –

Table 7 shows total demand for short-term credit, assuming that 93.1% of the arable land controlled by SMP's is planted to grains, oilseeds and sugar-beets, and 6.9% to vegetables.

Table 7
Estimated Demand for Short-Term Credit for SMP's

Planting	No of Has (000 Has.) Fr. Table 2	Demand for Credit/Ha.	Est. Total Short-Term Demand
Grains/Oilseeds/Sugar-Beets	14,017.88	$107.32	$ 1,504,398,882
Vegetables	1,038.92	$1,061.25	1,102,553,850
TOT Est. Demand for Short-term Credit			$ 2,606,952,732

Vegetable growers account for a disproportionate amount of the short-term demand for credit. The reason is the high per ha. cost of production. A total working capital requirement for SMP's, assuming a 50% loan-to-value ratio, is $5,213,905,464.

The question becomes how much of the total SMP working capital requirement can be generated by the SMP's themselves, through internally-generated funds, and how much must be borrowed from suppliers of credit. It would appear that the vegetable growers are potentially able to meet a large portion of their working capital requirements (Table 8), provided they have modern equipment and minimal crop losses from using old equipment, whereas the farms growing grain, oilseeds and sugar-beets have very limited ability to generate a substantial amount of working capital out of internally-generated funds (Table 9), regardless of whether or not they incur crop losses from using older equipment.

[26] IFC Vegetable Supply Chain Project – Ukraine. The cost/Ha. is based on 2005 data, and needs to be updated once more recent data is available.

Table 8
Estimated Revenue and Gross Margin
Commercial Vegetable Grower
(Described in Table 3)

1 Crop	2 Revenue (Per Ha.)[27]	3 Has. Planted (Table 3)	4 Revenues (USD) (Col. 3x4)	5 Costs (Table 4) (USD)	6 Gross Margin (USD) (Col 5x6)
Tomatoes	$8,215.20	20	$164,304	$ 80,468	$ 83,836
Potatoes	6,711.80	30	201,354	71,754	129,600
Red Beet	4,427.60	30	132,828	21,948	110,880
Carrot	7,176.40	20	143,528	38,080	105,448
		100	$642,014	$212,250	$429,764
40% Loss			$385,208		$172,958

It is normally estimated that crop losses from older machinery is higher for vegetables than they are with grains, oilseeds or sugar-beets. After accounting for crop loss due to older equipment, the vegetable farmer shown in this example would not have sufficient gross margin to cover working capital needs for the next crop cycle. However, if he is able to grow more than 1 crop during a season he may well be able to generate enough internal funds to cover working capital needs.

Table 9
Estimated Revenue and Gross Margin
Larger SMP (Described in Table 3)

1 Crop	2 Yield/Ha.[28] (Tons)	3 Price/Ton 2010[29] (USD)	4 Has. Planted (Table 3)	5 Revenues (USD) (Col. 2x3x4)	6 Costs (Table 4) (USD)	7 Gross Margin (USD) (Col 5x6)
Sunflowers	1.5	379.71	375	$213,587	$48,750	$164,837
Wheat	3.18	140.99	281	125.985	54,795	71,190
Barley	2.45	80.00[30]	281	55,076	35,125	19,951
Corn	3.6	80.00	250	72,000	46,250	25,750
Rapeseed	2.0	200.00	250	100,000	30,000	45,000
Sgr. Beet	7.7[31]	60.19	313	145,064	161,195	(46,131)
			1,750	$711,712	$376,115	$335,597
30% Loss				$498,198		$122,083

Even before adjusting for crop loss due to older machinery the SMP shown in Table 9 would not have sufficient working capital to cover working capital requirements necessary for the subsequent crop cycle. Total working capital requirements, needed for preparation for the next growing cycle, is $376,115 (from Table 5), greater than the gross margin of $335,597. This SMP is going to have to borrow over $40,000.00 to meet next year's requirement, even before paying fixed costs.

[27] IFC Vegetable Supply Chain Project - Ukraine
[28] Ukraine Grain Sector Review and UkrAgroConsult
[29] UkrAgroConsult and UkrStat (2010 Average Price), $1.00=UAH 7.95
[30] Prices for barley, corn and rapeseed are based on estimates based on prior prices, as data for 2011 harvest is not yet available
[31] Estimate based on 2005 data. 2010 and 2011 data unavailable

There are other factors, including:

- Table 9 assumes that this particular SMP is located in Southern or South-Central Ukraine, where he is able to grow sunflowers. In Table 9 sunflowers account for over 50% of the gross margin. If this SMP were located in Northern or Western Ukraine, where he would be unable to grow sunflowers, his gross margin would be substantially less.
- Applying the 30% estimated crop losses from using outmoded equipment, as estimated by John Deere/Ukraine, gross margin would be reduced by approximately two-thirds.
- Although many SMP's, especially those who live in sunflower-growing regions, might prefer to shift from wheat and barley to sunflower seeds, it may be difficult to do so if the SMP does not have access to the equipment required to grow and harvest sunflowers.

For the above reasons the estimated demand for short-term credit by SMP's, of $2,606,952,732 shown in Table 7, is probably conservative and, as has been observed, is likely not going to be covered by internally-generated funds.

As stated in the previous Section the conclusion drawn from Table 9 that most SMP's do not have adequate cash flow on which obtain credit from suppliers of credit, were corroborated by several experts interviewed during the preparation of this report.

Calculation of Unmet Demand – Medium-Term Credit

Medium financing consists not only of financing equipment, but also assets such as greenhouses and drip irrigation systems, for vegetable and fruit farmers, milking equipment, portable storage, etc.

The number that is normally used to calculate the needed investment for equipment on a typical Ukrainian farm is $1,000/hectare. For purposes of this analysis the following assumptions will be made:

- None of the SMP's growing grain, oilseeds and sugar-beets have invested in modern equipment, and therefore all farms in this classification will need to spend $1,000.00/ha. to modernize their equipment.
- Smaller SMP's growing grain, oilseeds and sugar-beets (51-500 Has.) may be able to utilize less expensive equipment from China and the CIS, and therefore may only have to spend $700/Ha. to modernize.
- For vegetable farms the required investment for equipment is likely larger than $1,000/ha., perhaps $2,000/hectare, due to the fact that the investment would include assets such as greenhouses and drip irrigation systems.
- Perhaps 20% of the vegetables farms have already made the necessary investment and therefore don't need to modernize.
- Down payment for a typical lease transaction in Ukraine is 30%, with the lessor financing the remaining 70%.

Based on the land areas in Table 7 investment requirements for SMP's in Ukraine, for equipment (medium-term financing) might look like the following:

Table 10
Estimated SMP Demand for Medium-Term Credit

Farm Type	Approx. Land Area (000 Has) (From Tables 2 & 7)	Percent of Previously Modernized	Approx. Land Area (000 Has) For Modernization	Cost of Modernization (Per Ha.)	Estimated Investment Cost
Grains/Oilseeds/ Sugar Beets Above 501 Has.	10,285.30	0	10,285.30	$1,000	$10.285 Billion
Grains/Oilseeds/ Sugar Beets 51 - 500 Has.	3,732.58	0	3,732.58	$700	$2.613 Billion
Vegetables	1,038.92	20.0	831.14	$2,000	$1.662 Billion
Total	15,056.80		14,849.02		$14,560 Billion
Demand for Credit @ 70% Financing					$10.192 Billion

At a 70% loan-to-value ratio SMP's would have to provide $4.368 billion, as a down payment or security deposit, in order to obtain the financing of $10.192 billion.

It is assumed that the total demand for credit of $10.192 billion will not be incurred in 1 year but, rather, will be incurred over 4 years. Therefore it is estimated that the annual demand for medium-term credit would be $2.548 billion, and the 30% down payment would be $1.092 billion/year.

Because of the low gross margins as illustrated in Tables 8 and 9, SMP's will not be able establish reserves that they could use to acquire new equipment, nor will they be able to show a lessor that the SMP has sufficient historical cash flow to make lease payments.

Calculation of Unmet Demand – Long-Term Credit

The prospect of long-term financing for agricultural land in Ukraine depends on whether or not SMP's are able to obtain clear and marketable Title to their land once the moratorium is lifted. If clear and marketable Title is forthcoming, then the amount of unmet demand for credit depends on the following:

- The value of the land.
- The loan to value ratio on which the banks will base their credit extensions.

In the US the maximum loan-to-value ratio for farmland is, probably, 70%. For purposes of this report it will be assumed that the loan-to-value ratio for farmland in Ukraine will be 50%.

The German-Ukrainian Policy Dialogue in Agriculture, in a report entitled "The Value of Farmland – Expected Farmland Prices in Ukraine After Lifting the Moratorium on Farmland Sales," estimated that the average price for 1 Ha. of farmland will be UAH 11,337, or $1,426.04 at an exchange rate of UAH 7.95=$1.00. One of the reasons why this study argued that the expected price was so low, compared to similar farmland in the US for example, was the historic low levels of productivity. They based their valuation on an estimate of the present value of future earnings from the land, discounted at the NBU discount rate. This is a very reasonable approach.

Some have argued that there is already a land market in Ukraine. This argument is based on what an investor is willing to pay for a share of common stock in a publicly listed agro-holding.

Since common stock is typically valued at the present value of future earnings, discounted at a risk-free rate, it seems reasonable to value farmland in Ukraine after lifting of the moratorium in the same manner.

Using this valuation method, and for purposes of this study, the following assumptions will be made, in order to estimate unmet demand for long-term credit in Ukraine:

- Estimated price/hectare for smaller farms growing grain and oilseeds will approximate the estimated price per hectare in the study, for Ivano Frankivsk Oblast – UAH 9,980/Ha. ($1,255.35)
- Estimated price/hectare for vegetable farms will approximate the estimated price per hectare in the study, for the Autonomous Republic of Crimea – UAH 15,505/Ha. ($1,950.31)
- Estimated price/hectare for larger farms growing grain and oilseeds will approximate the national average of UAH 11,337/Ha. ($1,426.04)
- Since there is currently no mortgaging of agricultural land in Ukraine, it will be assumed that all the land listed in Table 10 will constitute unmet demand

Using these assumptions the potential unmet demand for long-term financing might look like Table 11.

Table 11
Estimated Unmet SMP Demand - Long-Term Financing

Farm Type	Approx. Land Area (000 Has) (From Tables 2 & 7)	Estimated Value/Ha.[32] (US $)	Loan-to-Value Ratio	Unmet Demand Long-Term Credit
Grains/Oilseeds/ Sugar Beets Above 501 Has.	10,285.30	$1,426.04	.50	$7.334 Billion
Grains/Oilseeds/ Sugar Beets 51 - 500 Has.	3,732.58	$1,255.35	.50	$2.344 Billion
Vegetables	1,038.92	$1,950.31	.50	$1.003 Billion
Total	15,056.80			$10.681 Billion

The total unmet demand and total capital requirements, shown in the Executive Summary, assumes that SMP's have the ability to obtain credit on the basis of their existing cash flow and financial performance. As has been discussed throughout this report, especially through the use of the data contained in Table 9, it is extremely unlikely that SMP's can improve their access to credit based on existing documented cash flow.

4.2 Existing GOU Programs Designed to Improve SMP Access to Credit

There is very little GOU support fostering access to credit for SMP's. This may not be the intention of the policy, but all evidence suggests that it is true in practice. A list of GOU Agricultural Support Programs is included in this report, in Appendix B.

In 2011 the GOU has appropriated approximately UAH 10.2 billion ($1.28 billion) to agricultural support programs, and an additional UAH 369 million ($46.42 million) to

[32] "The Value of Farmland – Expected Farmland Prices in Ukraine After Lifting the Moratorium on Farmland Sales," German-Ukrainian Policy Dialogue in Agriculture – Institute for Economic Research and Policy Consulting

UkrAgroLeasing (UAL)[33], for a total of approximately UAH 10.57 billion ($1.33 billion). Out of the 2011 appropriation, approximately UAH 3.938 billion ($495 million) resulted from the formation in 2011 of the State Intervention Fund as part of the Agrarian Fund and purchase of material and technical resources for the needs of agricultural commodity producers. An additional UAH 2.5 billion was appropriated for supporting expanded growth of livestock in Ukraine. Details of the GOU's current appropriation include:

Support for Livestock Breeding – GOU support for livestock production and breeding has been substantially expanded in 2011, and is in response to the fact that much of Ukraine's meat intake is imported. Of the just over UAH 2.5 billion ($314 million) of total support for livestock, approximately UAH 2 billion ($252 million) supports livestock breeding and the rest is for partial reimbursement for the construction of livestock farms and enterprises. SMP's, except for the smallest SMP's who may have 1 or 2 cows, do not have livestock operations, therefore they are unable to use this portion of GOU's agricultural support program.

During a field trip to Rushen, the District Head was encouraging farmers to raise more livestock, for the simple reason that they could get more money from the Government but apparently without any consideration for whether or not such a decision made economic sense to the SMP. This seems to be a prevalent attitude among many with whom we spoke, that the "answer" is to get more money from the Government, as opposed to finding ways to improve the performance of their farms. The GOU support programs therefore appear to be causing farmers and local officials to make irrational investment decisions.

Purchases for the Agrarian Fund – According to the data in Appendix B in 2011 the GOU has appropriated approximately UAH 3.9 billion ($490 million) for purchases by the Agrarian Fund. This is the largest single agricultural appropriation by the GOU in 2011. Most likely these funds will be directed to the purchase of sugar, cereals, meat, oils and other products to the Agrarian Fund. The purpose of the procurement is likely the stabilization of prices and the maintenance of market equilibrium.

Interest Rate Subsidy – In 2011 approximately UAH 531 million ($67 million) has been appropriated for interest rate subsidies for agricultural loans extended by banks. In 2011 there were 60 borrowings where interest rate subsidies were applied. Evidence suggests that all 60 borrowings went to agro-holdings.

Interest rate subsidies operate as follows:

- The subsidy equals double NBU Discount Rate (now 15.5%).
- Only loans extended by commercial banks are eligible.
- According to interviews the application process is very difficult.
- The subsidy must be renewed every year, making it difficult to use for loans of a term longer than 12 months.

Recommendations:

- Use of the NBU discount rate to compute the subsidy should be modified or discontinued and, if discontinued, replaced with another means of computation, hopefully allowing the subsidy to be used to increase the number of loans extended under the subsidy.
- Consideration should be given to capping the subsidy amount per loan.
- Make the application process more transparent.
- Allow all financial institutions to be eligible to participate, including credit unions and other NBFI's.
- Undertake a publicity effort directed at SMP's

[33] UAL is the State-owned lessor. They receive money from the State budget at zero cost, and use the funds to acquire equipment, mostly manufactured in Ukraine, for re-lending to Ukrainian farmers. UAL has offices in every oblast of Ukraine and, at least in 2005, employs thousands of individuals.

The objective of the above recommendations would be to spread the benefit of the subsidy over more loans. Capping the subsidy amount per loan, combined with an improvement in the transparency of the application process and increasing the scope of financial services companies eligible to participate in the program, especially to credit unions, might improve the chances that more of the subsidy would be directed toward SMP's.

However a limitation on farm size for qualifying for the interest rate subsidy would likely not work, in directing more of the subsidy to SMP's. Agro-holdings are usually broken up into a large number of distinct farming units, each with a separate business registration. Each unit could apply for a subsidy on its own, as a small farm, defeating the purpose of limiting the subsidy to a maximum farm size. The same thing was done in the US, as a means to become eligible for low-cost Federal water. Large farming operations split their farms up into smaller units, and each unit applied for the water.

<u>Agricultural Insurance</u> – Up until 2009 the GOU was providing some support for premiums for agricultural insurance coverage, covering crop losses due to natural disasters, loss or damage to equipment, property destruction due to fire or natural disaster, etc. In 2008 GOU support for insurance was UAH 200 million ($25.15 million). This support ended in 2009 and has not been re-introduced.

Most farming operators in Ukraine, save for larger agro-holdings, currently have no insurance coverage for crop losses due to natural disasters, damage to equipment, destruction of property from natural disaster, etc. In addition, and mentioned elsewhere in this Report, is the fact that the GOU has not capitalized an indemnity fund to cover crop losses held in licensed warehouses with authority to issue warehouse receipts. The lack of a capitalized indemnity fund is a significant barrier to the expanded use of warehouse receipts, as good collateral for post-harvest credits extended by both banks as well as purchasers of commodities.

Recently, the GOU has made known its intention to establish a State-owned insurance company, with a capitalization $1 billion. This State-owned insurance company would then be responsible for writing coverage for farming operators, covering the perils discussed above. In discussing agricultural insurance with experts during the course of preparing this Report, several problems with the GOU's intention to set up a State-owned insurance company, including:

- Lack of Underwriting Expertise – It is unclear where a State-owned insurance company would get the expertise to underwrite property and casualty policies for Ukrainian farmers.
- Lack of confidence among market participants of the ability of a State-owned insurance company to promptly pay claims.
- The expressed intent of the GOU to set up a State-owned insurance company is keeping private, well capitalized insurers and reinsurers, who have expressed interest in coming into the Ukrainian Agricultural Insurance Market, out of the market.
- It is unclear if capitalization of a State Indemnity Fund covering licensed warehouses will be part of the $1 billion capitalization. If it is then there will be less capital available to pay claims for farm losses.
- It is unclear where the GOU would come up with the capitalization of $1 billion.

Recommendations –

- The GOU should use whatever capital it has available to capitalize a State-owned insurance company to instead capitalize the State Indemnity Fund to cover licensed warehouses.
- The GOU should publically state its intention not to establish a State-owned insurance company and, instead, encourage large international insurers and reinsurers to enter the market.
- The Project should make an effort to try to develop a market for "key man" insurance, and/or "buy/sell" agreements that might help suppliers of credit finance SMP's owned and/or operated by older citizens.

UkrAgroLeasing (UAL) – In 2011 UAL is to receive just over UAH 369 million ($46.4 million) from the State budget, appropriated as follows (From Appendix B):

- For procuring agricultural machinery for leasing – UAH 369 million ($46.4 million), including from the State budget to increase the authorized capital - 200 million, and from the proceeds of payments from customers - 169 million

Below is an excerpt from a trip report written by Robert Homans, a co-author of this Report, in January, 2005, for the USAID/Pragma Access to Credit Initiative, where I discussed UAL after having met with UAL's Vice Chairman:

"Although UKRAGRO Leasing described 2004 as a "good year," the information they gave me, on their deal flow and volume is instructive. According to the person I met with, the Vice Chair. of UKRAGRO Leasing, in 2004 they closed 2,700 transactions at an aggregate amount of Hr. 230 million. That works out to $22,320.00 per lease. It is generally agreed that the cost of underwriting and servicing a lease of $22,300.00 is the same as the cost of underwriting and servicing a lease several times larger. Therefore, given the fact that UKROAGRO Leasing occupies its own building in Kiev, has 23 regional offices, maintains the equipment that it has out on lease, it is impossible for me to see how UKROAGRO Leasing makes money when their average transaction size is so small."

It is unlikely that UAL has changed substantially since I wrote this description of UAL over 6 years ago.

Given the number of people it employs, their transaction size and the reported high default level, it is extremely unlikely that UAL makes money on an operating basis. If this assumption is correct UAL not only costs the State Budget money through the appropriation process, but the State Budget also has to cover UAL's operating losses which are likely substantial.

In 2007 the Antimonopoly Commission of Ukraine brought an action against UAL for anticompetitive practices in the leasing market. UAL was found to have engaged in such practices and was fined UAH 50,000 ($10,000.00 at the then exchange rate).

Recommendation –

- GOU should shut down UAL, and funds re-appropriated to the interest rate subsidy, and make the subsidy more focused toward SMP's.

UAL constitutes a substantial fiscal drain for the GOU. In addition farmers interviewed on prior occasions have stated that after having done business with UAL that they would never lease equipment again, from anyone.

Tuition Support for Students at the Agricultural Universities – Tuition support for students studying at the agricultural universities in Ukraine is appropriated under the Ministry of Education, yet it should be considered as a form of agricultural support offered by the GOU. The amount is likely substantial, especially if monthly student stipends, faculty salaries, books, maintenance of plant and equipment are included. As stated elsewhere in this report, if students studying at Ukraine's agricultural colleges are receiving GOU support, but are staying in Kyiv, then the money that the GOU spends to educate these students is lost to the people who need it the most – Ukraine's farmers.

4.3 Regulatory, Policy and Institutional Obstacles to Accessing Credit – SMP's Perspective

Regulatory & Policy Obstacles to Improving Access to Credit – Among many SMP's the belief seems to be that the GOU is their best source of money and support and, therefore, the only "obstacle" to greater SMP access to credit is that the GOU does not appropriate even more money to agriculture beyond what they are already appropriating.

As mentioned earlier the Head of the Rushen District Administration wanted farmers in the District to start raising cattle, for the expressed purpose of accessing state funds. The only objective appeared to be accessing State agricultural support funds approximately 50% of which goes to supporting cattle.

Some SMP's do believe that the GOU should re-direct more of its programs toward SMP's and away from agro-holdings. However it is unclear whether or not SMP's holding this belief see the GOU's support programs as the primary source of financing for their businesses or whether they see the GOU's support programs as a catalyst to help them obtain financing from private sources.

Not a single SMP contacted during field work expressed the belief that the GOU not moving faster on institutionalizing the warehouse receipt system or institutionalizing CPR's to take another example, constituted an obstacle for obtaining financing. Certainly suppliers of credit take the view that the GOU is not moving faster in these areas and, by not moving faster, constitutes and obstacle for them to extend more credit to SMP's. It is likely that most SMP's see the GOU's role simply as a source of money, rather than a catalyst to stimulate more private sector lending through improved public policy, and/or they may simply be unaware of the benefits of such instruments as CPR's and warehouse receipts and how such instruments might benefit them.

<u>Handling of VAT</u> – In Ukraine farming operators, those who pay VAT, put the VAT they collect from buyers into a separate account, and can then use the money in that account to pay for inputs needed for the next growing season. Because most SMP's have lower revenues per hectare than agro holdings, but pay the same per hectare for inputs, the cost of inputs for SMP's will usually exceed the amount in their VAT accounts putting even more pressure on SMP's working capital requirements. Some say this arrangement for handling VAT is an indirect subsidy to agro-holdings. It is not clear this is so. Perhaps the answer is for SMP's, at least those who pay VAT and do not operate in the cash market, to look for ways to becoming more efficient with the result that their VAT accounts will provide 100% of the cost of inputs.

<u>Institutional Obstacles</u> – The major institutional obstacle expressed by SMP's, at least with respect to banks, was that banks charge high interest rates. There was also some who expressed the difficulty in applying for loans, the amount of paperwork, the long approval process, or even availability.

1 or 2 SMP's contacted during field work implied that they believed that they could qualify for financing, but chose not to apply due to the high interest rates they say banks are charging. As stated earlier in this report it is unclear whether or not interest rates are, in fact, high, or whether the real problem is that SMP's do not appreciate the economic value of cash in their business. It is likely the latter. Also, based on the analysis shown above, it is likely that very few SMP's could qualify for credit unless they improved cash flow and liquidity, and are likely using high interest rates simply as a reason not to apply at all, knowing that they'd be turned down.

SECTION 5.0
ASSESSING SUPPLY OF CREDIT FOR SMP'S

5.1 Constraints to the Supply of Credit for SMP's

The major constraints to the supply of credit to SMP's in Ukraine are the following:

Most Important –

- Weak liquidity and cash flow (documented and otherwise) of most SMP's, preventing them from obtaining credit
- Weak profitability of Ukrainian banks as they recover from the financial crisis
- Uncertainty over the provisions of the Law on Land Markets and Law on Land Cadastre, both required to implement the end of the land moratorium, and is a condition for the establishment of mortgage lending in Ukraine.
- GOU policies, including export taxes/quotas, and tax policy which, together or separately, serve to reduce SMP profitability by reducing the price paid to SMP's.

Important Contributing Factors –

- Poor understanding by SMP's on how to use credit in their business
- Poor understanding by loan officers, especially at local branches of national banks, of how to underwrite an agricultural credit
- Lack of ability by lending personnel on how to explain the economic benefits of their lending products to their prospective customers
- Tardiness on the part of the GOU to implement enabling legislation and/or regulations required for both widespread use of CPR's, and of warehouse receipts as a form of collateral.

As stated in the Executive Summary there are some encouraging signs, including:

- Banks such as ProCredit, as well as the Ukraine Micro Lending Program, proving that lending to SMP's can be profitable, and that it is possible to offer SMP's timely service in the form of fast approval turnaround.
- Increased lending authority at branches of national banks.
- Increased lending activity at regional banks, especially regional banks that are part of the Ukraine Micro-Lending Program
- Increased activity on the part of value chain participants to supply both pre and post-harvest financing
- Strengthened credit unions that could play a significant role in financing the smallest SMP's

5.2 Current SMP Activity by Suppliers of Credit – Using Examples of Farms

<u>Banks</u>

In spite of some encouraging developments banks, especially national banks, are currently playing a very small role in financing SMP's, especially SMP's under 1,000 hectares, and will not play an expanded role in direct lending to SMP's (when an SMP is actually the borrower), until the following conditions are met:

- Improved profitability and cash flow on the part of SMP's
- Improved profitability of the banks
- Improved ability to underwrite agricultural credits and improved ability of loan officers to explain the economic benefits of lending products to their customers, both of which will take time for banks to implement
- Improved deposit and retail relationships with SMP's

As stated earlier the latter is important because of the fact that banks are intermediaries. Unless they have deposit and retail relationships with a given market segment, SMP's in this case, it is less likely that they will develop lending products to suit that market segment.

The encouraging developments include:

- During the field trip to Odessa the Branch Manager of ProCredit Bank was interviewed. ProCredit Bank, using limited financial data and very short turnaround has produced encouraging results in the Odessa Region with a low non-performing loan ratio. The other reason why this development is important is that it is an example of a bank giving substantial lending authority to the branches.
- The Ukraine Micro Lending Program has developed a semi-automated system that they have shared with some banks in Ukraine, mostly regional banks. According to the people we spoke with the Ukraine Micro Lending Program currently works with 4 regional banks in Ukraine, including CreditProm Bank, Bank of Lv'iv, Megabank and a bank in Kharkiv. The banks participating in the Ukraine Micro Lending Program have SMP loans on their books totaling approximately $5 million, consisting of 416 borrowers for an average loan size of approximately $12,000.00.
- Ukrainian banks are beginning to increase branch lending authority, making it possible for local branches to approve larger loans, without referring them to the Head Office in Kyiv.
- It appears that the NBU is going to allow banks to engage in currency swaps which, if true, could result in increased local currency lending including for SMP's.

Even with these encouraging developments the fact remains, as illustrated in Tables 3 through 11, that most SMP's in Ukraine likely have insufficient cash flow and liquidity with which to obtain credit from deposit-taking institutions, including banks.

As stated in the Executive summary one of the over-arching principles in this report is the focus on decision-making at the farm level. Looking at the level of bank lending to SMP's illustrates why this approach is important.

Table 12 shows the results of interviews with 8 farmers in the Odessa and Crimea Regions:

Table 12
Interview & Operational Data for Farmers Interviewed in Crimea and Odessa Regions

	Specialization	Agricultural producers								MTR suppliers	
	Name	**Bilan**	**Gran**	**Drachenko**	**Azbuka vkusa**	**Vinburnas**	**Agrarnoe**	**Agro-Iukos**	**Dikovets**	**Agro-Novator**	**Zemlerob-Profi**
	Region	Odessa	Odessa	Odessa	Odessa	Odessa	Crimea	Crimea	Crimea	Odessa	Crimea
1	Arable land, ha	88	160	526	7	742	1290	695	386		
	including grain and oil-poducing	35	45	526	0	709	1252	673	384		
	fruit and vegetable produce	53	115	0	7	33	38	22	2		
2	Number of owners	1	3	2	1	1	1	1	1	1	2
3	Number of employees (full-time)	15	25	9	28	15	27	12	11	5	16
4	Legal type of business organization	Farm enterprise	Limited liability	Private enterprise	Limited liability	Farm enterprise	Farm enterprise	Limited liability	Farm enterprise	Limited liability	Limited liability company
5	Level of the resource supplier and conditions	regional	regional and national	regional	regional	regional and national	regional	regional	regional	Producers	Producers
	pesticides	commodity credit up to 4 months	commodity credit up to 2 months	commodity credit up to 4 months	100% payment	commodity credit up to 6 months	commodity credit up to 3 months	100% payment	commodity credit up to 6 months	100% payment	100% payment
	equipment for drip watering	80% commodity credit up to 4 months	50% commodity credit up to 3 months	-	100% оплата	100% payment	100% payment	100% payment	100% payment	commodity credit limit	100% payment
	seed	50% commodity credit up to 4 months	50% commodity credit up to 4 months	100% payment	50% commodity credit up to 4 months	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment
	fertilizers	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment
	Fuel and lubrication materials	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	100% payment	-	100% payment
6	Percentage of sale volume by sales										
	Private wholesale traders (small	90	60	40	30	40	50	80	100	20	65
	traders, retail chains (large scale	10	10	60	70	60	50	20	-	50	-
	processing (retail traders)	-	30	-	-	-	-	-	-	30	35
7	Availability of equipment	3 tractors, complex of machinery, green house (8 800 м2)	10 tractors, complex of machinery, refrigerator of 1 000 t	2 combines, 3 tractors, complex of agricultural equipment, grain storage of 500 t	green house (41 000 m2), 2 tractors, machinery complex	5 tractors, 1 cargo truck, 2 minibuses, complex of agricultural equipment, grain storage of 1 500 t	8 tractors, 1 combine, grain storage (3 000 t), green houses (3000 m2), complex of agricultural equipment	3 tractors, 1 combine, green houses (4 000 m2), complex of agricultural equipment, grain strage of 2 000 t	4 tractors, 1 combine, grain storage of 300 t, pig farmin enterprise for 300 pigs, complex of agricultural equipment	grocery shop, storehouse, office, 2 passenger cars	3 grocery shops, office,1 minibus
8	Scheduled purchase of the agruicultural equipment	refrigeration equipment, green house (0,5 ha)	precooler, refrigerator room for 1 000 t, purchase of new agricultural equipment	1 tractor	1 cargo truck, green house (10 000 m)	refrigeraton equipment, perennial plantations (7 ha)	refrigeration equipment, green house (3 000 m2)	refrigeration equipment, green house (10 000 m2)	refrigeraton equipment, perennial plantations (7 ha)	second office in the southern part of the oblast	1 grocery shop
9	Existence of current bunk account	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
10	Existence of the unpaid credit	no	no	no	yes	no	yes	no	no	no	yes
11	Did bank representatives visit the	yes	yes	yes	yes	yes	yes	no	no	yes	yes
	* - information from MTR suppliers is in brackets										

Among other things Table 12 shows the following:

- Only 2 of the 8 farmers interviewed have outstanding bank loans.
- 6 of the 8 farmers are receiving some type of credit from input suppliers, for seeds and pesticides
- 2 farmers have 3-4 month's credit for payment of drip irrigation systems
- 7 farmers stated that they planned major purchases of agricultural equipment, including refrigeration equipment, greenhouses and delivery trucks (the 8th is planning to purchase a tractor)

The farmers included in Table 12 only have limited bank credit, but plan major equipment purchases. The only entities supplying credit to these farmers, with the exception of suppliers of drip irrigation equipment who offer 3-4 month's credit for a long-lived asset, are the input suppliers.

<u>Rushen District, Zhytomyr Oblast</u> - During the visit to Rushen 23 farmers were interviewed, plus the Head of the District Administration. In Rushen all of the farms are less than 3,000

Has. except for 2 farms owned by agro-holdings, a 5,000 ha. farm owned by Mriya, and a 15,000 Ha. farm owned by Novofastivske, owned by the holding company that includes PromInvest Bank. There are 2 bank branches in Rushen, Credit Agricole and Raiffeisen/Aval.

The Head of the Rushen District Administration, told us in our meeting that farmers in Rushen were able to borrow money from banks. In response we requested Credit Agricole to provide us with their lending activity in 2010 and 2011, originated through the branch in Rushen. Results are as follows:

- 2010 – 1 loan for UAH 900,000
- 2011 – 2 loans for UAH 2.5 million

It is likely that all 3 of these loans went to Myria (it is assumed that any lending requirements of Novofastivske would be addressed by PromInvest Bank), and none to SMP's. The Head of the Rushen District Administration is technically correct, that farmers in Rushen have been able to borrow from banks. However it is likely that the credits he was referring to were not extended to SMP's.

Unprofitability of Ukrainian Banks Limiting Supply of Credit

It is unlikely that Ukrainian banks will enter the lending market to SMP's in a major way until they become more profitable and, in most cases, repair their balance sheets.

The two most common measures of bank profitability are return on equity and return on total assets. Return on total assets includes all outstanding loans reported on the bank's balance sheet. For a well performing and profitable bank, it is common to see return on equity of upward of 15%, and return on assets of at least ¾ of 1 percent (.0075).

Table 13 shows the return on assets and return on equity, as of April 1, 2011, for the "Tier 1" Ukrainian banks. Tier 1 banks are the largest banks and usually, although by no means exclusively, the most profitable banks.

Table 13
Common Profitability Measures
Tier 1 Ukrainian Banks
April 1, 2011

Bank	Return on Assets	Return on Equity
PRIVATBANK	0.0034	0.03526
UKREXIMBANK	0.0002	0.00097
OSCHADBANK	0.0019	0.00752
RAIFFEISEN BANK AVAL	0.0000	0.00024
UKRSIBBANK	-0.0036	-0.03506
UKRSOTSBANK	0.0000	0.00029
PROMINVESTBANK	-0.0014	-0.01073
VTB BANK	0.0035	0.03266
ALFA-BANK	0.0001	0.00077
OTP BANK	0.0109	0.07349
FINANCE AND CREDIT	0.0028	0.03386
NADRA	0.0000	0.00029
FIRST UKR.INTERNATIONAL BANK	0.0004	0.00293
BROKBUSINESSBANK	0.0008	0.00524
KREDITPROMBANK	0.0000	0.00036
FORUM	-0.0217	-0.63544
UKRGAZBANK	0.0002	0.00165

Source: NBU Data

The only Tier 1 bank in Ukraine with profitability that is even close to normal standards is OTP Bank. OTP Bank is known as a very conservative bank, and almost certainly with no plans to lend to SMP's, and likely has a very low level of non-performing loans relative to its peers.

Table 14 shows similar data for selected Tier 2 banks, including banks that are considered to be possibly interested in expanding agricultural lending. The only Tier 2 bank included in Table 14 that shows strong profitability is Citibank. Citibank is included in Table 14 because of its US ownership and because it is the only bank, in either Tier 1 or Tier 2, with return on equity that would be considered acceptable in Western markets. It is likely that Citibank/Ukraine only lends to multinationals, where the source of the credit is outside of Ukraine. With a return on assets of over 2% and a return on equity of over 15%, it appears that Citibank is making good money in Ukraine.

Table 14
Common Profitability Measures
Selected Tier 2 Ukrainian Banks
Including Banks Interested in Agricultural Lending
April 1, 2011

Bank	Return on Assets	Return on Equity
ERSTE BANK	-0.0012	-0.00922
ING BANK UKRAINE	0.0083	0.04805
UNICREDITBANK	0.0012	0.01201
CITIBANK (UKRAINE)	0.0208	0.15162
CREDIT AGRICOLE BANK	0.0018	0.05397

Source: NBU Data

The regional banks who are clients of the Ukraine Micro Lending Project, mentioned earlier, are all Tier 3 or Tier 4 banks, with very low return on assets and return on equity.

It may be true that Ukrainian banks have a substantial amount of liquidity. There are some who wonder why Ukrainian banks are not lending more, given that they appear to have a substantial amount of liquidity. However it is also true that most Ukrainian banks (OTP and Citi being the likely exceptions) are carrying substantial loan losses on their books, relative to capital. It is likely that many Ukrainian banks have not written down all of their non-performing loans. The only way banks have to mitigate the risk from write-downs is to keep a high level of liquidity.

To go back to Table 12, showing the results of interviews with farmers in the Odessa Region, all of the respondents have deposit relationships with a bank. 6 of the 8 farmers interviewed stated that bankers have visited their farms. It would seem that many of the conditions for developing bank lending relationships are present among these respondents.

Credit Agricole - Of all the national banks in Ukraine the most likely to consider lending to SMP's is Credit Agricole. However it is unlikely that even Credit Agricole is going to enter into the SMP lending market in a major way until the following conditions are satisfied:

- Improvement in profitability ratios
- Spending substantial funds in training loan and credit officers in evaluating agricultural credits
- Moving more lending authority to the branches
- Developing increased deposit and retail relationships with SMP's

Regarding the last item, as stated earlier there are very few banks that will enter into a new market, on the lending side, unless they first have deposit and retail relationships. Banks are intermediaries, and make money off of taking deposits and lending out the money.

According to Credit Agricole they have 215 branches throughout Ukraine divided into 8 regions. After the financial crisis in 2008 Credit Agricole, then called Index Bank, reduced the branch lending authority to UAH 50,000 ($6,289). All loan requests above that amount needed to be approved in Kyiv.

Although Credit Agricole has since increased their branch lending limit somewhat, the effect of this low limit is to make anything except relatively large loans unprofitable to underwrite. It is probably no accident that the loans extended by Credit Agricole's Rushen Branch were all over $100,000.00. Unless Credit Agricole decides to increase its branch loan limit, and thereby improve their ability to make money on smaller loans, Credit Agricole will not be doing much lending to SMP's, even to SMP's with adequate documented cash flow. It is hoped that the regional pilot projects, discussed in Section 3.5, will serve as platform to allow national banks to explore ways in which they can profitably underwrite credits to SMP's.

Encouraging Developments

There are a number of encouraging developments on the lending side, which point to direct bank lending activity in the future, including:

- The success of lending programs used by ProCredit Bank
- The activities German Ukraine Micro Lending Program, especially the loan performance of the regional banks working with UMLP
- Increases in branch lending authority (Credit Agricole)
- Banks' relationships with input suppliers (to be discussed in the next section)
- Willingness of some banks, including Credit Agricole, to take a security interest in land leases (provided that the remaining lease term is more than 10 years).

Once banks do improve their profitability, develop deposit relationships with SMP's, increase branch lending authority and acquire more agricultural underwriting expertise, the encouraging developments listed above will hopefully serve as a template for accelerated bank lending activity with SMP's. It is hoped that the regional pilot projects may serve to accelerate this process.

<u>Value-Chain Participants</u>

Value-chain participants, including input suppliers, buyers and other entities, are now and will continue to be a major source of short-term credit to larger SMP's. When providing credit to SMP's value-chain participants have a number of advantages over banks, including:

- Ability of representatives to clearly express the economic advantages of their product(s)
- Continual contact with SMP's and familiarity with their operations
- Value-chain participants are not under NBU regulation/supervision and can thus be more flexible in extending credit to SMP's that banks otherwise might not consider
- Banks are more able to lend to a value-chain participant, such as the standby loan that IFC and Raiffeisen have extended to Bayer, who may then provide credit to an SMP, as opposed to lending directly to SMP's.

The last "bullet" is very important. With most value-chain participants, particularly the international chemical companies and traders, banks can get far better security extending credit to these companies, and still have an exposure to the SMP market, than they can lending directly to SMP's.

It is also very important to remember that value-chain participants, as with banks, will only provide credit to farms that they trust and who are likely to pay them back. The effect of limited cash flow on the ability of SMP's to borrow money, as illustrated in Table 9 in Section 4.0, apply equally to value-chain participants as they do to banks.

Value-Chain Participants – Recent Developments

- Raiffeisen Bank/Aval and IFC extension of a $140 million standby loan agreement to Bayer AG/Ukraine for the purpose of funding supplier credits to Ukrainian farmers.
- AMACO developing a barter program offering supplier credits to Ukrainian farmers, in return for payment in kind.
- AMD offering post harvest financing to farming operators running farms as small as 1,000 hectares.
- Chumak offers post harvest financing to growers who supply them with tomatoes.

Credits from value-chain participants are normally a percentage of the value of either the input, in the case of pre-harvest financing, or the commodity, in the case of post harvest financing. The extension is normally 50 – 70% of the value of either the input or the commodity.

Bayer – Rather than lending directly to SMP's, IFC and Raiffeisen/Aval are providing a standby facility to Bayer, to support its activities in extending supplier credits to Ukrainian farms. Bayer hopes to extend credits to 1,000 farms by 2013. Unlike lending directly to SMP's, by lending to Bayer IFC and Raiffeisen can rely on the credit of Bayer/Ukraine and, most likely, a corporate guarantee from Bayer's German parent. Raiffeisen, by lending to Bayer instead of directly to farms, can participate in SMP lending at a much lower level of risk compared to lending directly to SMP's.

The chemicals sold by Bayer in Ukraine are normally used by farmers in the middle of the growing cycle. According to Bayer, by the time the farmers need the chemicals sold by Bayer they have run out of money (not surprising given the data contained in Tables 3 through 11 in Section 4.0), thus Bayer's interest in extending credits. The term of the credit would be 2-3 months, and similar in structure to a financial CPR that is common in Brazil.

Given Bayer's exposure to some large agro-holdings a $140 million standby is not a large amount. According to Bayer their largest exposure in Ukraine, to a single customer, is $20 million. If the program proves to be a success Bayer will need to expand it, or run the risk of having large exposure(s) to 1 or 2 customers.

AMACO – AMACO is the largest distributor of foreign manufactured agricultural equipment in Ukraine, primarily Agco. They also distribute inputs. AMACO is owned by the Alkhorayef Group, based in Saudi Arabia. AMACO is considering the possibility of using financing from the Saudi Government to extend credit for inputs to Ukrainian farmers and taking payment in kind which they intend to sell to Middle Eastern buyers. AMACO's approach would be similar to commodity CPR's, now in use in Brazil.

ADM – ADM offers Ukrainian farms, some as small as 1,000 Has., post harvest financing based on a forward contract entered into between ADM and the farming operator. The credit is limited to rapeseed, a commodity that is not covered by export quotas and/or export taxes. The farming operator delivers the product directly to ADM's silos. There is no need for a warehouse receipt as Title passes from the farmer to ADM as soon as the product reaches ADM's silo. ADM extends credit up to 40% of the value of the commodity. ADM funds its program internally, using its "A+" credit rating (Fitch).

In none of these 3 examples is there evidence that there is a focus on SMP's. As ADM stated, the focus for them is trust and the farm's ability to perform on the forward contract. They do business with SMP's, but they are SMP's whom ADM has a relationship and whom they trust.

AMACO's equipment customers are exclusively agro-holdings, although they have over 7,000 customers throughout Ukraine to whom they sell parts. Their initial focus is likely to be agro-holdings, with whom they have long-standing relationships.

The company most likely to focus on SMP's is probably Bayer. With an initial standby credit of only $140 million, and the involvement of IFC, they need to spread their risk over a large number of farms which may force them to look at SMP's.

It is important to note that none of these companies are waiting for the GOU to complete legislation and regulations formalizing CPR's and warehouse receipts. In ADM's case they use forward contracts and deal only with farms they trust (the "3 C's"[34]). There is no need for warehouse receipts. It is likely that AMACO and Bayer will use the same strategy. Under the arrangement with Raiffeisen and IFC Bayer takes the "first loss" up to a certain level, after which they can call on the standby agreement.

Fruit & Vegetable Value Chain –

During preparation of this Report we spoke with Fozzy and Metro Cash & Carry, two of the largest retail purchasers of vegetables in Ukraine. Of the two, Fozzy appears to be the largest purchaser of domestically produced fruit and vegetables in Ukraine.

Fozzy - Fozzy and Silpo are under the same ownership. Silpo has recently undertaken renovations of its markets and has expanded its produce sections. The recently renovated store in the Podil District of Kyiv is an example. Fozzy indicated that the capability of suppliers to supply more produce, and the quality of produce, are both improving.

Fozzy stated that they have approximately 50 suppliers in Ukraine, based primarily in the following regions: Kherson; Crimea; Odessa; Dnepropetrovsk. Fozzy buys directly from farms, without using distributors. Suppliers must be capable of supplying Fozzy with at least 500 tons of vegetables, 20-30 tons of fruit and 10 tons of berries, per season. There are no prepayments but suppliers are paid within 21 days of delivery.

Starting next year Fozzy no plans to reduce the number of suppliers and will require more services from the remaining suppliers, including requirements to deliver packaged and cooled vegetables so that they may immediately placed on retail shelves. These additional requirements will place increased pressure on the suppliers that remain, to invest in cold storage facilities, refrigerated trucks, boxes, etc. Fozzy does not provide any financing assistance to these suppliers, to help them finance additional equipment that they may require to continue their relationships with suppliers.

Financing opportunities for farms supplying Fozzy would include equipment financing, for additional equipment suppliers are going to have to acquire to continue on Fozzy's approved list of suppliers, as well as purchase order financing. With 21 day terms Fozzy's suppliers may qualify for purchase order financing from bank or other financial institutions. Proceeds from purchase order financing could be used for purchase of seeds, inputs, etc.

Metro Cash & Carry - Metro Cash & Carry only purchases potatoes and cabbage from Ukrainian suppliers. All other produce sold in Metro's stores are purchased from foreign growers. For potatoes and cabbage, Metro has buyers who are located in the appropriate regions of Ukraine who buy from farms on a largely ad-hoc basis.

Metro is currently considering bringing the "focus farm" program to Ukraine, similar to what they now use in the Philippines and Indonesia for mangoes and other fruits. Under this program Metro would work with a selected group of farms, help them apply modern farming techniques and then buy their products. There are currently no specific plans to bring this program to Ukraine, but perhaps discussions can be initiated with Metro, to include this program in one of the sub-regional pilot projects.

Chumak does offer purchase order financing to many of the selected farms who supply them with tomatoes. Chumak advances payments for produce to the farmers with whom it does business with on a regular basis prior to delivery.

[34] The "3 C's" refer to cash flow, collateral and character, all major considerations for any supplier of credit willing to extend a business borrowing to a customer.

Credit Unions

Credit Unions may become a significant supplier of credit to SMP's, especially servicing small SMP's with both lending and depository products. Currently credit unions in Ukraine may only lend to natural persons, although there is a draft law that will allow credit unions to lend to legal entities which, if passed, may greatly expand the reach of credit unions.

Credit unions in Ukraine have recently undergone a major restructuring as a result of the financial crisis. In 2008 there were 829 credit unions in Ukraine with nearly 2.7 million members. In the 2nd Quarter of 2010 there were 700 credit unions and just over 1.5 million members.[35] Today, at the margin, credit unions are more concentrated in rural areas than they were prior to the financial crisis.[36] In the 2nd Quarter of 2010 credit unions had approximately 4.3% of the outstanding loans in Ukraine and 1.3% of deposits.[37]

In June, 2007 6 regional credit unions formed an organization called PZV, which is both an association of credit unions and also serves to guarantee deposits. PZV currently has 50 member credit unions.[38] According to the CEO of PZV, members currently have approximately UAH 430 million in outstanding loans, 17% of which have been extended to agricultural entities and virtually all of those to SMP's with mostly less than 100 Has.

The CEO of PZV stated that there are credit unions among its membership that focus on lending to SMP's. He cited as examples 2 credit unions, one in Kamianets-Podilskyi and the other in Kherson. The former focuses on farms of less than 100 Has. producing grain; the later focuses on commercial vegetable producers. The CEO of PZV stated further that management teams of the credit unions in both Kamianets-Podilskyi and in Kherson are extremely knowledgeable about agriculture and continuously visit their customers' farms.

Credit Unions have the following specific characteristics and face the following limitations:

Characteristics:

- Credit unions charge high interest rates on loans – in 2010 the average interest rate was 36.4%, apr.
- Average cost of funds in 2010 was approximately 20% p.a.
- Most deposits are for 1 year or less.

Limitations:

- As stated earlier, under current law credit unions can only lend to natural persons.
- Credit unions in Ukraine have limited access to medium and long-term funding, and thus limit loan terms to 12 months or less.
- Credit unions are not eligible for GOU agricultural support programs, most notably the interest rate subsidy.

In spite of the high interest rate on loans the CEO of PZV mentioned that credit unions experience a high rate of repeat borrowers, borrowers who pay off their first loan and borrow more money. If high interest rates were an issue for customers of credit unions, they would likely either not borrow at all or try to find another lender. In fact the CEO of PZV mentioned that many credit union customers would prefer to borrow from credit unions, in spite of the high rates, because credit unions are knowledgeable about their business, and offer quick decisions with minimal paperwork. He also said that banks are simply not willing to even consider SMP's farming less than 100 Has. The level of repeat customers also suggests that

[35] "Credit Unions in Ukraine after the Financial Crisis – Actual Situation and Development Prospects," Dr. Heinz Strubenhoff, Veronika Movchan, Vitaliy Kravchuk, Dmitriy Naumenko & Dr. Oleg Nivievskyi, Dec. 2010, prepared for KfW.
[36] ibid
[37] ibid
[38] ibid

these customers know how to effectively use borrowed money in their operations; otherwise they wouldn't borrow the money.

Most credit unions in Ukraine get their funding, especially medium-term funding, from 2 sources, Volksbank AG, from Austria and Oikocredit (Netherlands). Volksbank in its latest annual report has reported substantial losses in both Romania and Ukraine. Volksbank's Eastern European operation is supposedly up for sale, possibly to Russia's Sberbank.[39] It remains to be seen whether Volksbank, either on its own or as part of Sberbank, will continue to be a source of medium-term funds for Ukrainian credit unions.

There appears to be 2 significant lending gaps faced by SMP's in Ukraine

- The gap between the minimum size of SMP for whom the banks would consider lending and suppliers offering credit, approximately 1,000 Has., and the maximum size of SMP to whom credit unions are able to lend, approximately 100 Has.
- The inability of credit unions to offer medium-term financing to customers, especially vegetable producers in the Kherson area, who must then go to other suppliers of credit to obtain medium-term financing.

Recommendations:

1. Set up a sub-regional pilot project focused on credit unions, possibly in Kherson or Kamianets-Podilskyi.
2. Possible cooperation with the Farm Credit System in the US, help PZV set up a network of agricultural credit unions in Ukraine.
3. Assist in diversifying sources of medium-term funds available to credit unions, especially considering the possible exit of Volksbank.
4. Work with GOU in passing the new law that would allow credit unions to lend to legal entities.
5. Work with the GOU to include credit unions in the GOU's interest rate subsidy program.
6. Facilitate relationships between credit unions and suppliers of inputs and small equipment, such as Kyiv Atlantic/Ukraine.

5.3 Future Ability of Suppliers of Credit to Address Unmet Demand

As has been discussed elsewhere in this report suppliers of credit, taken together, are not addressing the unmet credit demand of SMP's. There are a number of factors limiting suppliers of credit from addressing unmet demand including:

- The lack of liquidity and cash flow faced by most SMP's partly, although by no means exclusively as has been discussed, partly as a result of suppressed revenues received by many SMP's for the crops they produce, especially grain.
- Lack of expertise on the part of banks in underwriting agricultural credits.
- Poor profitability and high loan losses among major banks in Ukraine.
- Limited deposit and retail relationships with SMP's, without which there will likely be little bank lending activity.
- Inability of credit suppliers to act against their secured interest in the event of a loan default.
- Failure of the GOU to adequately established an indemnity fund backing the issuance of warehouse receipts by licensed warehouses.
- Failure of the GOU to allow for a free market in agricultural insurance, through the GOU's plan to set up a State-owned insurance company in spite of their inability to adequately fund a pool with which to pay claims.

Value chain participants and credit unions are doing the most to address lending needs of SMP's, but they have limitations, including:

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[39] Bloomberg.com/news, June 8, 2011

- Credit unions and value chain participants will only extend short-term credit
- Credit unions, at the present time, cannot lend to legal entities and can only lend to natural persons.
- It is likely that most value chain participants will only lend to farms, and only then to existing customers, of more than 1,000 hectares. Credit unions, on the other hand, rarely lend to farms over 100 hectares, leaving a "credit gap" consisting of farms between 100 and 1,000 Has.

Only banks are capable of providing the full range of credit needed by SMP's, including medium term credit (leasing) and, if and when the moratorium is lifted, long term credit. As we have seen in this report banks have significant limitations in lending to SMP's that will likely not be resolved for the next 2-3 years.

5.4 Effect of the Lifting of the Moratorium on Land Sales & SMP Access to Credit

As stated earlier in the report the effect of the lifting of the moratorium (if it is lifted) depends on the actual provisions contained in the Law on Land Markets and Law on Land Cadastre at the time they are enacted. Provisions that have been discussed include:

- Creation of a State-owned land bank to be used for buying land.
- Limitations on foreign ownership of land.
- Limitations on how much land one person, or one legal entity, can own.

However the most important provision relates to the ability of farmers, not just SMP's, to obtain clear and marketable Title to their land. Without the ability to obtain clear and marketable Title farmers will not be able to use their land as collateral for long-term financing and, generally, will have no protection against those who might want to acquire their land for themselves.

There may also be potential social problems, arising out of appraisals for similar farms in the same District coming in with very different values. Another important provision, most likely in the Law on Land Markets, is a system of appraisal that will be accepted by all market participants, including lenders and the farmers themselves.

The study cited previously, "The Value of Farmland – Expected Farmland Prices in Ukraine after Lifting the Moratorium on Farmland Sales," uses a classical approach to determining the value of farmland. Simply put, the approach this study used to determine expected farmland value after lifting of the moratorium is the present value of future income from the land, discounted at a discount rate similar to the current NBU discount rate. This approach yielded a national average of UAH 11,337/Ha. ($1,426.04).

It is quite possible; applying the methodology used in this report, values for comparable land in the same District would come out quite differently, depending on the quality of the farm management. For example in Rushen we observed 2 land plots in close proximity to each other planted to sugar beets. On one plot the plants were stunted; on the other plot the plants were healthy and growing quickly. Using the study, the latter plot will have the most value, but what kind of behavior will be elicited from the owner of the plot where the plants are stunted?

Recommendation –

The moratorium should not be lifted, until such time as farmers are able to obtain clear and marketable Title to their land, and a transparent land market is assured.

Some banks, including Credit Agricole, are now willing to consider taking leases with at least a 10 year term remaining, as collateral for loans. This development may improve conditions for medium and long-term lending to SMP's, short of ending the moratorium.

5.5 Institutional Constraints Preventing Suppliers of Credit From Addressing Unmet Demand

The major institutional barrier to increased lending to SMP's is the difficulty of establishing an SMP's ability to repay a loan obligation. Most SMP's, for reasons stated elsewhere in this report, do not have sufficient cash flow and liquidity to qualify for an extension of credit. The problem becomes more acute the longer the term of the loan. In any loan, whether it is pre-harvest financing, a financial lease, or a long term loan secured by real property, and no matter what type of credit supplier (banks, value chain participants and credit unions), lenders consider the primary source of repayment as the borrower's historical cash flow.

As mentioned in the report there are other factors, including:

- Lack of underwriting expertise among loan and credit officers, especially at the branch level
- Lack of lending authority at the branch level

The above two constraints apply less to credit unions, regional banks and value chain participants than they do to national banks. Most value chain participants are staffed by sales people and credit officers who are extremely knowledgeable about farming operations. It also appears that both regional banks and credit unions are staffed by individuals who are also quite knowledgeable about farming operations.

There are new product developments that may serve to make it easier for banks to address the SMP market, including:

- ProCredit Bank's success in providing "quick turnaround" loans to SMP's
- The work of the (German) Ukraine Micro Lending Program, in conjunction with 4 Ukrainian regional banks.

Hopefully what has been tried by ProCredit Bank, as well as the 4 regional banks working with the Ukraine Micro Lending Program, can be used as a template for other banks, especially banks such as Credit Agricole who are planning to expand their agricultural lending activities, perhaps in conjunction with one or more of the regional pilot projects proposed in Section 3.5.

5.6 Policy and Regulatory Constraints Faced by Suppliers of Credit to SMP's

There are several current GOU policies constraining the supply of credit to SMP's, including:

Existing GOU Agricultural Support Policies/The Interest Rate Subsidy - The interest rate subsidy is currently a subsidy used exclusively by agro-holdings. So far in 2011 there have been 60 transactions where the subsidy has been applied. All of them have gone to agro-holdings.

The interest rate subsidy can only be used for bank loans. Independent equipment lessors and credit unions are not allowed to apply the subsidy to their loans. In addition the process of applying for the subsidy has been described as being extremely opaque and difficult to understand. The subsidy has to be renewed annually, making it very difficult to use for any type of loan with a term longer than 12 months.

Existing GOU Agricultural Support Policies/UkrAgroLeasing (UAL) – The presence of UkrAgroLeasing in the leasing market has effectively put a damper on commercial leasing transactions involving agricultural equipment and, especially, for SMP's. Provisions in UAL's lease agreement contain numerous ways UAL can declare a lessee in default, most of which are undoubtedly unknown to the lessee. According to farmer interviews, this has resulted in an acute lack of trust of UAL, and of the Financial Leasing Industry in general.

Export Quotas/Export Taxes on Grain – Export duties and quotas, along with non-payment of VAT refunds to exporters, serve to depress the price the SMP receives for his grain and, in turn, serves to increase the SMP's requirement for outside capital.

Handling of VAT – As mentioned elsewhere in the report, because SMP's tend to be less productive than agro-holdings their VAT accounts usually are not sufficient to pay for all the inputs they need to use, forcing them to obtain outside financing. Recommendation – VAT on commodity sales should be dropped and farms taxed like any other business.

Warehouse Receipts – According to the State Registry they have licensed 705 storage facilities in Ukraine, capable of handling 30 million tons of commodities. There is now an automated system capable of registered secured interest in collateral. This system could likely be expanded to include CPR's.

Although warehouse receipts are currently being used in Ukraine, as long as there is no indemnity fund, that a lender could look to if collateral in which a warehouse receipt was issued was lost, a lender wishing to take a warehouse receipt as collateral must credit approve 2 entities, not just one – the borrower; the warehouse. This situation increases the lender's cost of underwriting, and makes a loan potentially less profitable for a lender, increasing the probability that lender will consider the loan request an economically unattractive proposition and not proceed with the loan, even though the farmer may have adequate credit.

In addition to there not being an indemnity fund the registration system is not yet linked with a similar registration system at the Ministry of Justice. Until the systems are linked it is difficult for a lender to register collateral at the Ministry of Justice, which is often a necessary condition in order to perfect Security Interest.

Lack of Effective Insurance Coverage – The GOU has proposed that it set up a State-owned insurance company, and capitalize it with $1 billion available to pay claims. In addition to the fact that the GOU doesn't have $1 billion to capitalize a State-owned insurance company, the possibility of a State-owned insurance company has served to reduce the presence of private insurers in the market, especially international re-insurers, who have the capability of evaluating risk and paying claims. Finally, market participants have limited confidence in the ability of a State-owned insurance company to pay claims on a timely basis.

NBU Regulations Effecting Banks –

- Reserve Requirements - The NBU has reserve requirements that banks must meet when they extend credit to farming operations. The reserve requirement for agricultural lending has recently been relaxed, which will hopefully result in banks becoming more active in agricultural lending.
- Lack of a Swap Market – The NBU has recently indicated that they will begin to allow banks to engage in swap transactions. The ability of banks to engage in exchange rate swaps will hopefully allow banks to hedge their foreign currency risk and result in improved ability to make more loans in Hyrvna.

In order to both improve the leasing volume in Ukraine, and to get ready for the possibility of the lifting of the land moratorium, banks must become more involved in the agricultural market. Only banks will originate mortgages, and banks are major players in financial leasing.

There are additional constraints applying to all business lending, not just to SMP's, including:

GOU Policies Promoting One Type of Lender Over Another – The interest rate subsidy program is one example of discriminatory policies favoring one lender over another. In the case of the interest subsidy program banks are eligible to participate but other lenders are not. The Association of Ukrainian Banks is a very powerful organization in Ukraine. They do their best in insuring that their Members are in an advantageous position relative to other lenders.

Difficulty in Perfecting Title to Collateral and/or Leased Assets – As mentioned earlier a key factor in the success of CPR's in Brazil is the ability of the lender to repossess its asset without a court order. Currently this ability does not exist in Ukraine. In addition it can be very difficult to repossess leased assets in Ukraine without a court order.

Two positive developments, at least with respect to leasing, the new tax code has changed some of the VAT rules with respect to Titled Vehicles (including tractors, etc.), and repossession is no longer a taxable event for the lessor, for purposes of both VAT and profit tax.

5.7 Conclusion

All of the policy and regulatory constraints faced by suppliers of credit in lending to SMP's do not offset the fact, stressed throughout this report, that most SMP's do not have sufficient documented cash flow necessary to repay new debt obligations. Even assuming all of the policy and regulatory constraints are adequately addressed, the fact remains that suppliers of credit will not expand lending to SMP's in a substantial way until such time as there is adequate documented cash flow to service debt obligations.

APPENDIX A

Scope of Work

Regulatory and Institutional Constraints to Accessing Credit for SMP's

AgroInvest is a five-year, $20.6 million program designed to provide technical assistance to accelerate and broaden economic recovery in Ukraine and increase the country's contribution to global food security efforts. Ukraine requires assistance to tap its vast potential in agriculture, thereby diversifying its sources of prosperity, leading to a broader economic recovery and contributing to a more food secure world. The project consists of three components, implemented in parallel:

- Component 1: Support a Stable, Market-Oriented Policy Environment
- Component 2: Stimulate Access to Credit for Small and Medium Producers
- Component 3: Facilitate Market Infrastructure for Small and Medium Producers

Access to Credit for Small and Medium Producers (SMPs) – Component 2

AgroInvest focuses on increasing efficiencies, competitiveness, access to credit and production of SMPs. There are currently 42,000 SMPs which account for 58% of cultivated land and comprise private farms between 5 and 3,000 hectares. SMPs produce half of Ukraine's grain and oil seeds, and produce most of Ukraine's fruits and vegetables.

Following the global economic crisis, high levels of non-performing loans (NPLs) in the Ukrainian commercial banking system represent a major challenge for banks to increase lending, despite high liquidity in the banking system as a whole. Bank credit to enterprises has shown some signs of revival; however, lending to the agricultural system, in particular, is perceived as a high credit risk. Institutionally, few banks, if any, understand primary agricultural production and crop cycles, funding requirements of SMPs, and how to accurately assess agriculture sector risk.

Because of difficulty in finding suitable collateral, most banks and leasing companies are reluctant to provide credit to SMPs. Should the moratorium on agricultural land sales be lifted, this could provide increased opportunities for SMPs to access finance through formal financial institutions by using land as collateral.

Other value chain actors (in addition to banks and NBFIs) are also sources of agricultural finance; for example, some larger processors, traders, and input suppliers are providing pre-harvest finance for their suppliers.

Agricultural Finance Enabling Environment

Agricultural sector policies have been increasingly driven by short-term political interests, increased cronyism, and market distortions as a result of the excessive influence of specific industry groups/businesses through lobbying efforts. Recent examples of such policies include the following:
(i) The establishment of quotas on the export of grain products and non-transparent procedures for the allocation of licenses for these quotas;
(ii) GOU policies aimed at introducing profit and trade margin controls on key staple food products;
(iii) A draft law which would prohibit the export of key agricultural commodities for all companies except for state-run monopolies (government agents) or agricultural producers;
(iv) A recent law passed by parliament which mandates the sale of export quotas at auctions (it has not yet signed by President Viktor Yanukovych).

Grain quotas prevented SMPs and other producers from selling their grain at world market prices while the GOU actions glutted the market with inexpensive grain, creating a situation where there is not enough room to store the new harvest. Consequently, traders and banks are increasingly reluctant to finance grain purchases given the risk that their clients may not be able to sell at market prices or that they themselves may not be able to export.

The lack of certainty with duration and extension of quotas, non-transparent mechanisms for their distribution to market operators, and restrictive volumes of export quotas have significantly deteriorated the attractiveness of financing and investing in Ukraine's agricultural sector.

Background Information/Reading
Some research papers and assessments have already been prepared and should be reviewed by the consultant(s), including but not limited to a 2009 *Opportunities for USAID Assistance to Agriculture in Ukraine* and a 2010 Eastagri-FAO/EBRD assessment *UKRAINE: Grain Sector Review and Public Private Policy Dialogue* (http://www.eastagri.org/publications/pub_docs/ebdr_Ukraine72c.pdf).

Objectives and Tasks

Objectives:
Through stakeholder meetings and research, the consultants will identify the primary regulatory and institutional barriers to increasing access to credit for SMPs, as well as the potential transactions and volume impact from improving policies to increase credit for SMPs

Policy and Regulatory Assessment tasks/questions:

- From the demand side, what specifically do SMPs view as the key policy or regulatory obstacles to accessing finance, from both formal financial institutions (banks and NBFIs) and value chain Suppliers of credit (e.g. input suppliers, processors, traders)?
- From the supply side, what specifically do banks, NBFIs and value chain Suppliers of credit view as the key policy or regulatory obstacles to increasing access to credit for SMPs?
- Who would be the primary beneficiaries of specific policy improvements, how many beneficiaries could likely benefit from the policy reform and what is the estimated volume of lending that could be expected from each regulatory change/improvement identified as a key barrier/opportunity for SMP finance?
- Name the specific regulatory barriers to increase access to credit for SMPs, and if possible, provide proposed solutions for policy improvement (in non-legal drafting language).
- Propose new polices or regulations that do not currently exist that, as a matter of good international practice, would facilitate access to credit for SMPs.
- What kind of agricultural finance policies would contribute most to increasing the number of SMP finance transactions? SMP finance volume?

The policy assessment should address, among other barriers, regulatory constraints/opportunities for utilizing the following: grain warehouse receipts, pre-harvest finance, hedging instruments for financial institutions, and using leases as collateral to secure finance.

Institutional Assessment tasks/questions:

- Are banks and NBFIs interested and willing to extend credit to the agricultural sector?
- Do banks and NBFIs have liquidity and resources to expand their lending operations?
- Do value chain actors have the resources to provide financing to SMPs? If so, what kind of financing?
- Do SMPs will have the capacity to engage, both individually and collectively, with banks, NBFIs and value chain Suppliers of credit to access finance?
- From the demand side, what specifically do SMPs view as the key NON-policy obstacles to accessing finance, from both formal financial institutions (banks and NBFIs) and value chain Suppliers of credit (e.g. input suppliers, processors, traders)?
- From the supply side, what specifically do banks, NBFIs and value chain Suppliers of

credit view as the key NON-policy obstacles to increasing access to credit for SMPs?
- What types of interventions from the AgroInvest project could most effectively contribute to improving institutional capacity of financial institutions and value chain Suppliers of credit to increase access to credit for SMPs?

Deliverables

- Report Outline (agreed with AgroInvest team week 1)
- Preliminary results and recommendations provided to AgroInvest beginning of week 3
- Draft Report to AgroInvest team middle of week 3
- Final Report to AgroInvest team and USAID middle of week 4
- Briefing and presentation at USAID middle of week 4

Supervision

The Senior Financial Sector Expert will work under the direction of and report to the Chief of Party or his designee who will be responsible for monitoring the consultant's performance.

Level of Effort

The total LOE for the Senior Financial Sector Expert assignment is estimated up to 17 days (the LOE for the Ukrainian Financial Policy Expert will is also estimated to be 17 days), including report writing and presentation. The assignment will begin on or about April 21, 2011 and conclude on or about May 13, 2011.

A local agricultural policy expert will be contracted to work with the Senior Financial Sector Expert; and AgroInvest staff will serve as a resource for the consultants, participate in meetings, and provide logistical support for the consultants.

Work Schedule

21-22 April (LOE 2):

- Develop report draft outline and receive approval from AgroInvest
- Begin interviews (banks, NBFIs, SMPs, agri-processors, input suppliers, traders, associations, NGOs, financial/policy/research institutions, other donors)

25-29 April (Mon. 25 Apr. Easter; LOE 4):

- Continue interviews and data collection

2-6 May (Mon. 2 May Labor Day; LOE 4):

- Complete initial interviews/meetings and data collection
- Draft preliminary results and recommendations
- Draft Report submitted

9-13 May (Mon. 9 May Victory Day; LOE 4):

- Respond to AgroInvest comments on Draft Report
- Final interviews and data collection

16-18 May (Mon – Wed; LOE 3):

- Prepare Final Report for review and feedback from AgroInvest team
- Submit Final Report
- Review Meeting with USAID

TOTAL LOE:

Expat Senior Financial Sector Expert: 20 days
Ukrainian Financial Policy Expert: 17 days

Candidate/Consultant requirements

This scope of work requires one expat senior financial sector expert and a Ukrainian financial sector policy expert. The expat financial sector expert will have experience in the former Soviet Union analyzing and advising developing country and financial sector policy issues and providing concrete recommendations for increased access to credit for SMP finance stakeholders. The Ukrainian financial policy expert will have in-depth knowledge of the

Ukrainian finance as relates to the agricultural sector and agricultural regulations and legislation.

APPENDIX B

Government of Ukraine
Existing Agricultural Support Programs

State support to the agricultural producers includes expenditures of general and special funds of the state budget as well as special VAT treatment introduced for agricultural producers.
Expenditures of the State Budget of Ukraine for 2011 (the total amount 325.528.750,3 thou UAH) provides the following ways of supporting agricultural producers by the state:
1) The Cabinet of Ministers of Ukraine has the right to initiate the issue of domestic bonds amounting to 5.000.000 thou UAH with subsequent transfer of the funds to the Agrarian Fund on conditions of loans.
2) Expenditures of the State Budget of Ukraine for 2011 for supporting agricultural producers include:

		Name	Thou UAH	
	2800000	The Ministry of Agrarian Policy and Food of Ukraine	10 203 529,9 **1 640 130,2** **3 103 437,7**	Total Of them expenditures for development
1.	2801040	Partial reimbursement to the economic entities the cost of construction and reconstruction of livestock farms and enterprises for producing combined feed.	500 000,0	Expenditures for development General fund
2.	2801150	State support to the agricultural cooperative providing services	5 000,0	Expenditures for development General fund
3.	2801170	Financing of activities for protection, regeneration and increase of the soil fertility	5 000,0	Expenditures for development General fund
4.	2801210	Budget subsidy for livestock and state support to horticulture	100 000,0	Expenditures for development General fund
5.	2801240	Financial support to agricultural enterprises through the mechanisms of reducing cost of creating	531 416,5	Expenditures for development General fund
6.	2801260	Measures for protection and rational use of forests provided to the agricultural enterprises for permanent use	17 757,5	Expenditures for development General fund
7.	2801350	Establishment of young orchards, vineyards and small fruit acreage, caring for them	556 750,0	Expenditures for development Special fund
8.	2801430	Partial compensation of the cost of sophisticated agricultural equipment of domestic production	10 000,0	Expenditures for development General fund
9.	2801510	State support to the development of hopyards	98 250,0	Expenditures for development Special fund
10.	2801520	Financial support for creation of wholesale markets for agricultural products	10 000,0	Expenditures for development General fund
11.	2801540	State support of livestock breeding	2 030 000,0	Expenditures for development Special fund
12.	2801590	Partial reimbursement to the of the cost for construction of new greenhouses	50 000,0	Expenditures for development General fund

		Total by programs	**3 914 174,0**	

3) The State Budget for 2011 provides (code 6800000) increase of the authorized capital of the national joint stock company *Ukragroleasing* for procurement of agricultural machinery from Ukrainian manufacturers and leasing out the equipment to farmers - 200 million UAH (from the general fund) and UAH 169.3 million from the General Fund, for a total of UAH 369 million

4) It is also provided for lending from the State Budget for 2011 through the Ministry of Agrarian Policy and Food of Ukraine

2801460	Providing credits to farms	28 000,0
2801490	Purchase of breeding bulls and cows, domestic equipment and machinery for agricultural producers and its subsequent transfer on conditions of financial leasing	25 000,0
2801560	Formation of the State Intervention Fund as part of the Agrarian Fund and purchase of material and technical resources for the needs of agricultural commodity producers	3 938 237,5

LIST OF MEETINGS

Mr. Gary Reusche, Ms. Inna Chapko, Mr. Andriy Zaripov, Ms. Iryna Hrynyuk, IFC Agricultural Finance and Agricultural Insurance Projects

Mr. Vasily Yaroshovets, First Deputy Chairman, Agrarian Union of Ukraine

Ms. Lilia Zhuravel, Deputy Head of Agriculture/Large Corporate Business, Alfa Bank

Mr. Vitaliy E. Skotsyk, Country Manager Ukraine, AMACO & concurrently CEO of Landkom

Ms. Natalia V. Boyko, Executive Director, Kyiv-Atlantic Ukraine (KAU)

Prof. Dr. Vitaliy Lvov, Cabinet of Ministers of Ukraine/Advisor to the Vice-Prime Minister of Ukraine

Mr. Jean-Jacques Herve, Counselor to the Board in Agricultural Matters PJSC Credit Agricole

Mr. Dominique Menu, Resident & Country Director, PNP Paribas

Mr. Danny Mandryk, Consorsis Insurance Group (formerly Head of Aon Insurance Ukraine)

Mr. Ruben Beliaev, Government Relations Manager, LLC ADM Ukraine

Mr. Ludwig Striewe, Deputy Managing Director, Alfred C. Toepfer International (Ukraine) LLC

Mr. Tobias Menne, Managing Director/Head of BayerCrop Science, Northern Black Sea Region, Bayer Ltd.

Mr. Alexej Mitjagin, Deputy Managing Director, Head of Sales – Ukraine, Moldova, Georgia, Armenia, Bayer, Ltd.

Mr. Ivan Vyshnevskiy, Chief Executive Officer, Alliance of Credit Unions ("PZV")

Mr. Oleg Nivievskyi, Ph.D., Head of the Centre, Institute for Economic Research – German-Ukrainian Policy Dialogue in Agriculture

Mr. Sergiy Kandul, Agricultural Consultant, Institute for Economic Research – German-Ukrainian Policy Dialogue in Agriculture

Mr. Edward Yakushev, Deputy Vice President, Kyiv Region Chamber of Commerce (Bila Tserkva, Kyiv Oblast)

Mr. Igor Hodakivskiy, Director, State Registry of Ukraine

Mr. Volodomyr Bondarchuk, Head of District Administration, Rushen, Zhytomyr

List of Meetings
(Continued)

Mr. Holger Wiefel, Programme Coordinator, Ukraine Micro Lending Programme

Ms. Olena, Zhmur, Bank Advisor, Ukraine Micro Lending Programme

Mr. Kai D. Schneider, Regional Business Analyst, Metro Cash & Carry Ukraine

Mr. Bohdan Chomiak, Senior Advisor, UkrAgroConsult

Mr. Victor E. Andrievsky, Director, Agrarian Markets Development Institute (AMDI)

Ms. Sheila Tschinkel, Senior Advisor, FINREP Project

Mr. Maxim Didenko, Head of department purchases of fruits and vegetables, Fozzy

Mr. Mustafa Shabanov, Director of Azovo-Chernomorskiy Credit union

Mr. Igor Hrapaty, Director of Zemlerob-Profi LLC;

Mr. Valeriy Gerusov, Director of Farm Agrarnoe

Mr. Nikolay Choropita, of Director Agro-Ukos LLC

Mr. Nikolay Dikovetc, Farm Dikovetc

Mr. Gennadiy Timovskiy, Director of Azbuka vkusa LLC

Mr. Sergey Panchenko, Director of Farm Vinburnas

Mr. Igor Milchev, Agro-Novator LLC

Mr. Vitaliy Bilan, Director of Farm Bilan

Mr. Victor Derevencha, Gran LLC

Mr. Aleksander Drachenko, Farm Drachenko

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