

**Impact of Agricultural Service Cooperatives on Subsistence  
Farmer Livelihoods in Ukraine**

**Rebecca A. McNeal 2010**

School of Community Economic Development

Southern New Hampshire University

Submitted in Partial Fulfillment of Requirements for the  
Masters of Science in International Community Economic Development

Approved by

Professor Catherine Rielly, Ph.D.

### ACKNOWLEDGEMENTS

This report would not have been possible without the assistance and support of

Catherine Rielly, Ph.D.

Heifer International Ukraine Director Viktor Teres, Vladyslav Karpenko, Community Development Specialist and Anna Pidgoma, Project Coordinator.

I am grateful for their help and support

and

The International Community of Community Development Professionals

## ACRONYMS

ARIS	Ukrainian Agricultural and Rural Investment Strategy
COPAC	Committee for the Promotion and Advancement of Cooperatives
EBRD	European Bank for Reconstruction and Development
HPI	Heifer Program International
ICA	International Cooperative Alliance
IERPC	Institute for Economic Research and Policy Consulting in Ukraine
ILO	International Labor Organization
Kg	Kilogram
Km	Kilometer
MDG	Millenium Development Goals
NGO	Nongovernmental Organization
PPP	Purchasing power parity
UAH	Ukrainian Hrivnya
USD	United States Dollar

## DEFINITION

Kolkhoze was a form of collective farming in the Soviet Union that existed along with state farms. Kolkhoze was a component of the socialized farm sector that began to emerge in Soviet agriculture after the October Revolution of 1917 as an antithesis to individual or family farming.

## ABSTRACT

Heifer Project International Ukraine (Heifer) projects are designed to educate and improve production output through provision of livestock to needy farmers with the offspring “passed-on” to other families. Seeking ways to improve program goals and income/livelihood levels of project families, Heifer requested analysis of the objectives and results of five of its agricultural service cooperatives (ASC). Its goal was to validate income/livelihood increase, nutritional consumption increase, improved social capital and increased skills and education of its project holders, through analysis of milk production, sales and consumption and skills training. Five Heifer ASCs were compared. In theory, agricultural skills and education provided by the cooperative will allow diversification of outputs; increased milk production and collection; increased income and nutritional farm consumption; and social capital which will improve sustainability, job production, and participation, allowing the village to strengthen and grow.

## Contents

<b>ACKNOWLEDGEMENTS.....</b>	<b>2</b>
<b>ACRONYMS .....</b>	<b>3</b>
<b>I.....</b>	<b>65</b>
1.1. BACKGROUND.....	65
1.1.1. <i>Problem Statement</i> .....	65
1.1.2. <i>Conceptual Framework</i> .....	76
1.1.3. <i>Statement of Hypothesis</i> .....	114
1.1.4. <i>Assumptions</i> .....	124
<b>II.....</b>	<b>1312</b>
2.1. LITERATURE REVIEW .....	1312
2.1.1. <i>Agriculture in Ukraine—1991 to Present</i> .....	1312
2.1.2. <i>Subsistence Farming</i> .....	1817
2.1.3. <i>Soviet Cooperative History</i> .....	1918
2.1.4. <i>Democratically Based Cooperatives</i> .....	2120
2.1.5. <i>Agricultural Service Cooperative Role in Community Based Development</i> .....	2423
2.1.6. <i>Problems and Criticisms of Cooperatives</i> .....	2625
2.1.7. <i>Heifer Ukraine's Vision</i> .....	2928
<b>III.....</b>	<b>3130</b>
3.1 DESIGN OF THE STUDY .....	3130
3.1.1. <i>Objectives</i> .....	3130
3.1.2. <i>Study Area</i> .....	3332
3.1.3. <i>Source of Data</i> .....	3332
3.1.4. <i>Limitations</i> .....	3534
3.1.5. <i>Reporting Period</i> .....	3635
3.1.6. <i>General Project Information/Project Holder Comments/Plan Update</i> .....	3736
<b>IV.....</b>	<b>3837</b>
4.1. FINDINGS.....	3837
4.1.1. <i>Income/Livelihood Increases</i> .....	3837
4.1.2. <i>Education and skills training, Technical information</i> .....	4039
4.1.3. <i>Community Based Participation and Social Capital</i> .....	4140
4.1.4. <i>Nutrition and Food Security</i> .....	4241
4.1.5. <i>Project Objectives and Results</i> .....	4544
<i>Field Office Comments</i> .....	5150
<b>V.....</b>	<b>5251</b>
5.1. RECOMMENDATIONS .....	5251
<b>VI.....</b>	<b>5554</b>
6.1. CONCLUSION .....	5554
<i>Appendix I, General Project Information</i> .....	6059
<b>REFERENCES .....</b>	<b>6362</b>

# I.

## ***1.1. Background***

### **1.1.1. Problem Statement**

Ukraine gained independence in 1991 and has not been rewarded for its attempt at democracy. It has historically had and currently has an import/export alliance with Russia and Russia's former states. It is home to Russia's only naval base on the Black Sea, which it leases to Russia.

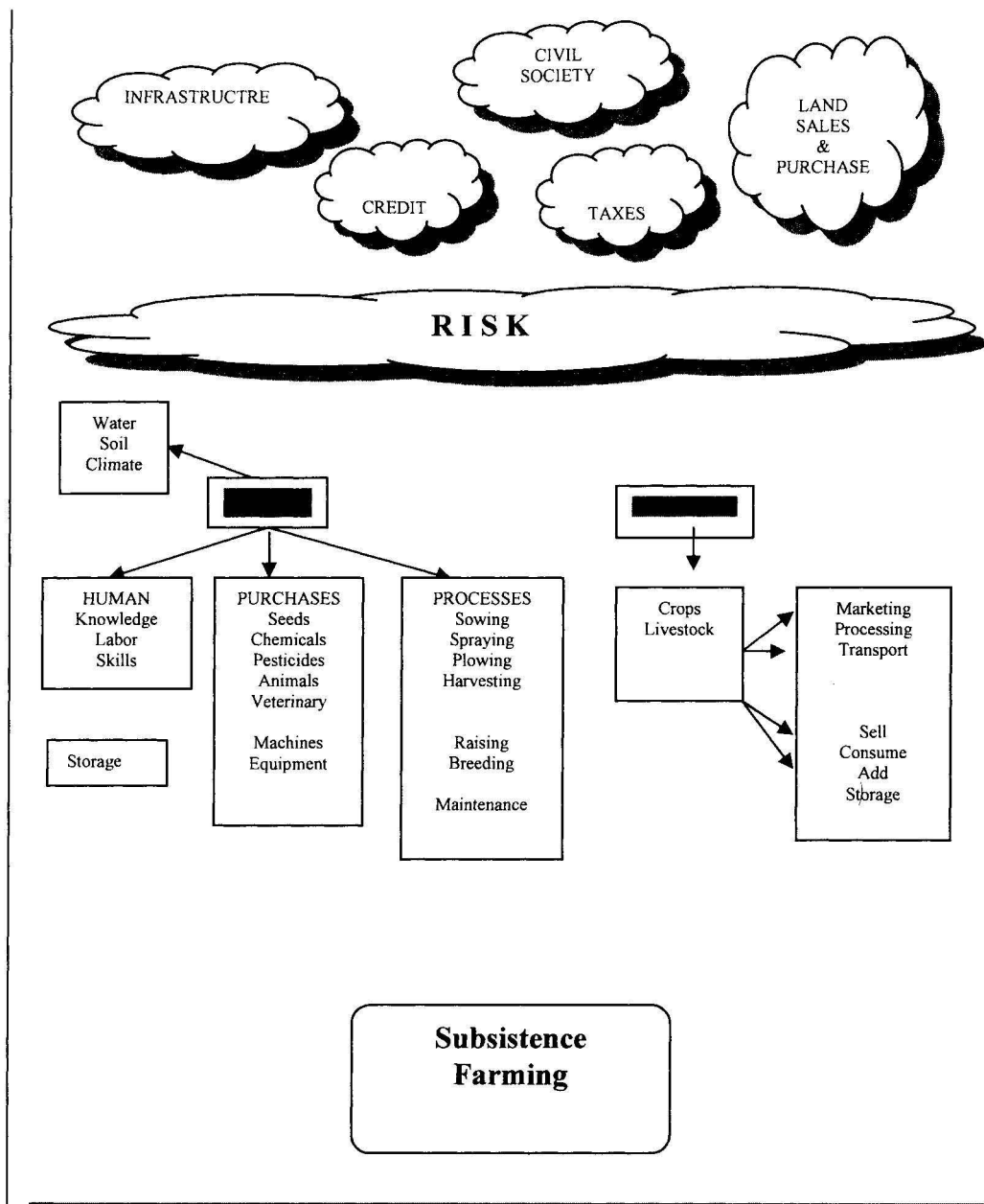
Subsistence farming is an alternative to welfare in Ukraine. Farmers lack animal husbandry skills, business education and training. These problems are compounded with limited access to sufficient agricultural inputs—seeds, chemicals, animals, machinery, equipment and veterinary services—and output markets: sales, processing and transport. Historically, these farmers have had limited social and political empowerment and representation. These factors have lead to a low income level for 12-13,000,000 subsistence farmers. The land market sector is in its infancy and extremely limited. Farmers also face numerous infrastructure and legal problems. Development of Ukraine's farms and villages is of critical importance to the country as it faces massive urbanization and the country's youth migrate to the cities. Ukraine is also politically strategic because of its geographic location between Europe and the Soviet Union.

### **1.1.2. Conceptual Framework**

The goal of this research is to verify the increase in income, nutrition, practical training, skills and civic participation in village society attributable to the organization and implementation of the Agricultural Service Cooperative (ASC). These factors which contribute to the benefits of ASCs: increase of product sales, output prices and diversity; decrease of agricultural input costs; increase in family consumption of nutritional agricultural products; increase in ASC membership and promotion of civil society through the organization and management of democratically designed and functioning ASCs.

The indicators of success are that the net farm income will increase 15-20%, membership and dues of the ASC will increase, volume and nutritional value of agricultural products consumed at the home will increase, and the number of trainees and type of trainings held within each cooperative will support the democratic process and development of social capital.

Progress will be verified with the Heifer six month project reports, Heifer surveys and mid-term reviews. Assumptions of the project are political stability in Ukraine, i.e., the taxation system remains, farm input price stability; availability and affordability of inputs; continued Heifer project support; cooperative member participation and willingness to learn new ideas and technology; and minimization of risk from uncontrollable disasters/ through diversification.



**Figure 1 Subsistence Farming**

Figure 1 shows how subsistence farmers are affected on a country-wide level by:

- the availability of short-term and long-term credit for purchasing the inputs: equipment, seeds, livestock
- workable infrastructure of roads for transporting products to and from markets, availability of irrigation water, fuel



- civil society processes: contracts, access to the judicial system, recourse from corruption, schools, medical services, adequate retirement funds
- land transfers:—sales, purchases and leasing, registration and appraisal,
- stability of taxation and currency exchanges.
- extension and agricultural information services

Subsistence farmers are affected on a Farm level by:

- acreage, soil, climate, slope of their individual farms
- availability and price stability of inputs; seeds: chemicals, livestock, equipment, veterinary services, storage
- input processes; affordability and access to plowing, sowing, fertilizing and, harvesting crops—for livestock and dairy farmers, the collection, storage and processing milk, meat, honey and eggs.
- individual farm management skills; farm technology, horticultural knowledge and animal husbandry skills; participation in civil society through democratic planning processes allowing them to build sustainability and social capital; and participation in cooperative services
- equipment maintenance and repair

Overarching all these needs is risk. Farmers lack control over nature meaning they have little control over farm processes, outcomes and results of farming, thus complicating planning. The ability of the farmer to lesson risk due to infestation and diseases, natural disaster, lack of input and output markets, nutrition and health of the

farmer and family, allows farmers the opportunity to diversify, save and plan for the future, adjust farm size to optimum, sell more than consumed and increase competitiveness.

This research aims to address the following questions:

1. Do Heifer ASCs increase the income and improve the standard of living of farmers of the village community?
2. Do ASCs increase nutritional consumption and decrease lack of access to food—assisting in compliance with Millenium Development Goal Number 1: to eradicate extreme poverty and hunger and, to reduce child mortality?
3. Do Heifer ASCs improve skills and training in animal husbandry and provide current information on production and marketing?
4. Do Heifer ASCs achieve through the “Cornerstones Plan” and elements of community-based participation and planning, empowerment of communities in order to develop and implement their own plans to build capacity and social capital through civic participation and democratic activities?

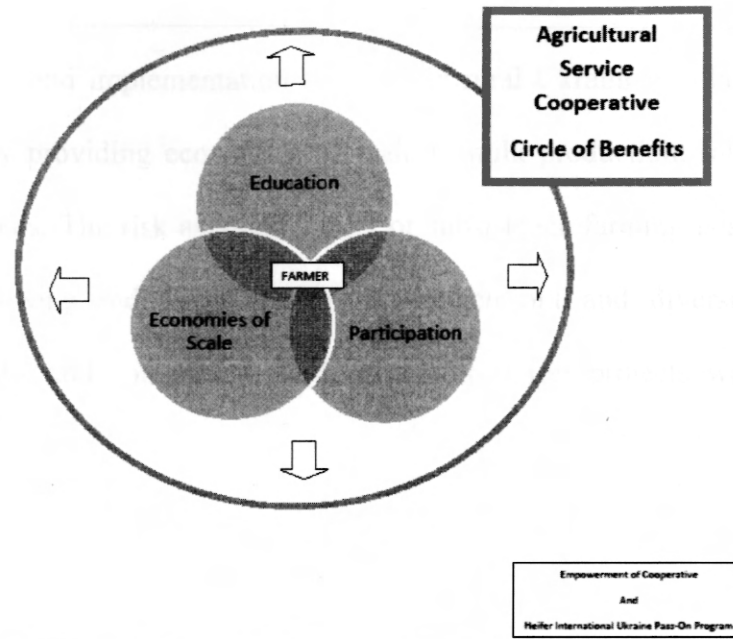


Figure 2 Cooperative Circle of Benefits

### 1.1.3. Statement of Hypothesis

The Circle of Benefits that agricultural service cooperatives provide—economies of scale, democratic participation and skills and educational training—in Figure 1 suggests that Ukrainian villages will see increases in household income and nutritional benefit (through additional consumption of eggs, milk, meat, and vegetables). Continuity and sustainability of village life, which is increasingly threatened by out-migration, is ensured by empowering the subsistence farmer through education and training skills in agricultural production and animal husbandry. Civic and political empowerment is achieved through participation, increased social capital and shared risk.

#### **1.1.4. Assumptions**

The introduction and implementation of ASCs in rural Ukrainian villages will increase local income by providing economies of scale to milk production, sales and access to inputs and outputs. The risk aversion aspect of subsistence farming is shared across the community allowing individual farmers to branch out and diversify. Education, agricultural skills and community participation in Heifer projects will improve with ASCs.

## **II.**

### ***2.1. Literature Review***

#### **2.1.1. Agriculture in Ukraine—1991 to Present**

Ukraine has an Annual GDP of \$7,000 (PPP) with agriculture accounting for 40 percent of the gross domestic product. It has a population of 45,994,288 and employs 25 percent of its total in agriculture (CIA, 2008). Ukraine has fertile soils, ideal climate, ports and proximity to import/export markets in Russia, the Middle East, Africa and the European Union.

According to the State Statistics Committee of Ukraine (2004), villages in Ukraine are deteriorating and depopulating. There are 28,597 rural villages, of which 151 have no population and 8,000 belong to the category of degrading. Over the past five years, more than 300 schools, over 2,000 kindergartens, 2,000 cultural venues, and nearly 500 local hospitals were closed. Only 17 percent of the residential population is provided with central heat and water supplies, 12 percent have sewage systems and 27 percent are supplied with natural gas. The rural population includes 28.6 percent of pensioners (State Statistics Committee of Ukraine, 2004).

Prior to Independence in 1991, rural life was almost entirely organized by the collective and state farm. The traditional individual sector—household plot—was supported by the local collective, which actually provided all the upstream and downstream services. The collective substituted for the missing market channels. The

kolkhozes provided assistance with cultivation, plowing, housing, heating, water and gas, subsidies, state and bank credits, and, favorable input supply and marketing deals (Lerman, Z., Sedik, D., Pugachov, and N., Goncharuk, A., 2007). Those free services are not widespread any more. Private farmers no longer enjoy the benefits of the past from the farm enterprise.

Post-Soviet agricultural reforms came in two stages, the first being distribution of paper certificates of land shares—showing entitlement to a plot of land of a specified size in an unspecified location but did not allocate land use rights. Share-based privatization did not actually allocate land use rights to individuals. The second phase began with a Presidential Decree in 1999 that reorganized collective land into private ownership. The Land Code of 2001 recognized private land ownership and allowed certain land transactions—while maintaining the moratorium on buying and selling of land until 2008—extended to 2011. The average size allocated to rural residents is about 4.5 hectares.

This type of reform may have made things worse, because the disciplines of the free market system were applied without any of the opportunities, and because the market—particularly in the agricultural sector—was far from free. A United Nations development report states, “For economies to function better, other things must fall into place first...Economic growth must be pursued in an equitable way that benefits the poor, and an enabling environment must be created that increases the productivity of farmers

and nurtures entrepreneurial activity among small and medium enterprises” (UN, 2003ba) p.4.

“Everywhere in the world, farm sizes are increased through land market transactions” (Lerman, Z., 2004) p468. Land markets allow land to flow move—from pensioners to farmers—or from less efficient to more efficient producers, thus increasing productivity and improving efficiency. The Ukrainian land market is not competitive and farm land prices would probably be very low. There is a small group of wealthy, well-connected and well-informed buyers and a large group of poor landowners, poorly informed and often in a position of dependence. According to the World Bank, in the early phase of the land market, there must be a critical mass of property with clear title, secure boundaries and disposition rights. The legal sector must support private property, the regulating institutions must be in place and there must be a critical mass of participants with access to suitable funding. The land market must then have most of the institutions in place and functioning (World Bank, 2000b).

For progress to take place, judges, prosecutors and police must be in a position to enforce contracts and implement rules and regulations and stem endemic corruption. A lack of institutional traditions of transparent decision-making and a societal understanding of the importance of corporate governance and of politics and financial institutions, as well as highly distorted economics and monopoly suppliers all induce corruption and negatively impact the development of the agricultural sector. Corruption pervades all levels of society and government and all spheres of economic activity in

Ukraine (US & Foreign Commercial Service, US Department of State, 2006). According to the Heritage Foundation's 2009 Index of Economic Freedom, Ukraine scores 152 out of 179 countries with a 48.8 cumulative score 2.2, worse than 2008<sup>1</sup>

“Ukraine inherited an extremely distorted economic system from the Soviet Union with artificial prices, inefficient firms, and numerous economic and administrative barriers to the exchange of ideas, technologies and standards” (von Cramon-Taubadel, S., Demyanenko, S., and, Zorya, S., (Eds.), 2004) p 25. The lack of credit and support from the banking system, or a working futures market affect agriculture negatively. Independence from the United Soviet Socialist Republic has not brought the prosperity possible through democracy. In the early 1990s monetary income of an average Ukrainian family fell by almost 60 percent. State-provided social insurance, which had in the past guaranteed a moderate level of economic and social security, was terminated. Poverty was not viewed as a national problem until restructuring occurred. The communist ideology did not admit the existence of poor people in Ukraine although they definitely existed, usually in the villages. To survive, most of “the new poor” had to turn to the “shadow economy” or to self-production—subsistence farming. The “shadow economy” is estimated to be around 50 percent of official gross domestic product. Poverty was defined as the inability of the household to provide for its basic needs. Thirteen million people currently live in poverty on subsistence farms. The Ukrainian government estimates relative poverty has remained constant at around 27 percent of the population. Formal employment opportunities available to rural residents have declined

---

<sup>1</sup> The range of the index values is: § 100-80 free § 79.9 – 70 mostly free § 69.9-60 moderately free § 59.9 – 50 mostly un-free § 49.9-0 repressed (Heritage Foundation, 2009).



by 30 percent between 1990 and today. The hidden unemployment rate in rural areas is somewhere between 0.9 and 0.95 million people, according to the World Bank (CPSU 2008-11).

Investment in new rural roads and facilities has dropped from the 1990's to reach 3 percent of its 1990 level in 2002; 17 percent of their 1990 level in 1999 for water system network; 63 percent of their 1990 level in 1999 for natural gas network. The installation of telephone lines has increased by 50 percent. Existing facilities have not been properly maintained for more than a decade. The former collective used to be responsible for this upkeep and maintenance, but now it is the responsibility of the local village. It is estimated that the current budget allocations only cover between 1 and 3 percent of the cost for maintenance. "Five hundred sixty villages were not reachable by paved roads in 1995, this number increased to 1,500 villages in 2005 due to the deterioration of these roads" (ARIS, 2005) p.31.

Post-Soviet environmental issues in Ukraine are varied. In 1986 the Chernobyl nuclear disaster created unusable farmland and required 200,000 village residents to be relocated. The Ministry of Environment was established to levy taxes on air, water emissions and solid waste disposal. The application of farm chemicals was and is rather low. A concern in the villages is that the storage of manure is often inefficient and groundwater pollution can occur. "Groundwater contamination takes place both directly on the territory of livestock and at the sites of manure storage and indirectly in the areas

of livestock pasture, where lands have been irrigated by so-called ‘cleaned wastewater,’” (Magmedov, 1999, p 2).

### **2.1.2. Subsistence Farming**

A household plot is a farm that operates as a physical person, without incorporation or formal registration. It relies on family labor, and its main objective is to satisfy the subsistence needs of the household. Subsistence farms tend to be located in remote rural areas and have poor access to markets. Farms are small with low capital endowments. There are two types of land parcels that a Ukrainian rural resident may receive. One is 0.25-0.35 hectares within the village, where he builds his home and has a small garden. The other is outside of the village, in the field, and that parcel can reach 2-5 hectares, depending on the region. Many subsistence transactions are possible through barter and services in-kind. “Some Ukrainian economists estimate that 30 - 40 percent of a commodity’s value is lost through barter transactions,” (Namken, J., 1999) p 5. The average landowner is allowed to earn about 4400 UAH per year by renting out his 4.5 hectare share, the equivalent to two and one half months of wages or representing 25 percent of the total incomes of rural households.

The main difficulties subsistence farmers experience trying to sell farm products are low prices, no buyer, transport, untimely payments, difficulty meeting quality standards, and low volume of crops. The problems of smallness are also reflected in a

shortage of machinery—it is either too expensive for a small farmer to buy, or the farmer is restricted due to lack of collateral or high transaction costs for small loans.

Household plots do not pay value-added tax on produce sold, nor are deductions made for the farmer's social security. This tax system reduces farmers' incentives to move into the "formal" agricultural sector or to be able to transform their household plots into market-oriented farms. Expanding a household plot into a private farm involves many costs, and reducing these costs could encourage more people to leave the subsistence sector (Borodina, E., and Borodina, A., 2007). There is limited access to credit and no financial support from the state for household plots (Lerman, et al., 2007).

### **2.1.3. Soviet Cooperative History**

The Social-Democratic (Menshevik), 1903-1906 era put a great deal of effort into trade unions, cooperatives and cultural-educational organizations. Soviet kolkhoze leaders emerged from the Mensheviks. In the beginning of 1902, a total of 1,625 cooperative associations had been registered in Russia with 18,023 members in 1912 and reaching 35,200 in 1915, comprising 11 and 12 million households or one-third of the Russian Empire. These cooperatives had mandatory membership and participation, (Chayanov, 1966).

In 1916, M.I. Tugan-Baranovsky, a Marxist and socialist wrote "The Social Foundations of Cooperation". He described a cooperative as an economic enterprise

made up of voluntarily associated individuals whose goal was not to obtain the maximum profit, but to increase the income derived from its members or reduce expenses by common economic management (Chayanov, 1966)

In 1917, the Russian Revolution destroyed private land ownership through seizure and redistribution of land. This revolution had no connection whatsoever with cooperatives. It led to the success of the Bolshevik workers and their slogan: “The land—to the working people!” All land was handed over to self-employed peasant farms. This transfer of privately owned land to the peasantry was carried out in the form of socialization, in the sense of the abolition of any ownership of land (it belongs equally to everybody, like the light and the air) or nationalization, that is, the transfer of the land into the ownership and control of the state. Starting with small-scale agricultural producers and the means of production, cooperatives soon turned to the organization of the cooperative marketing of agricultural products, which they developed into alliances combining hundreds of thousands of small-scale producers. Agricultural cooperatives evolved into organizations with their own operations for marketing and reprocessing of agricultural raw materials. Villages industrialized—and cooperatives gained control of the rural economy. Cooperatives were communistic in spirit; all the products obtained were distributed in kind among the families according to the number of mouths to be fed. Collectivization worked well with the shared use of tractors and cultivation of the land. Members were able to resist capitalist exploitation with its own weapons: powerful enterprises, large-scale turnovers and perfected techniques. The size and breadth of the

market is one of the most important preconditions for organization on cooperative principles.

#### **2.1.4. Democratically Based Cooperatives**

Democratic cooperatives are based on the values of self-help, self-control, self-administration and determination, self-responsibility, democracy, equality, equity and solidarity. Cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others: one member—one vote. A cooperative is a jointly-owned, democratically-controlled enterprise of an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through by-laws/statutes.

Mr. Roberto Rodrigues, International Labor Organization President, stated in his introduction to the Committee for Promotion and Advancement of Cooperatives, “Cooperatives provide a path for the future, as they are able to mobilize social capital. They bridge the economic and the social by providing employment and equitable distribution of profits and above all, social justice”(ILO, 2000) p.14.

“Farmers universally complain of low prices received for products, difficulty finding buyers for their products; problems with transporting their products to the market and often indicate that their output is too small to sell. With regard to inputs, the universal complaint is that the prices are too high. All these are typical problems of

smallness” (Lerman, 2004) p. 471. To be successful, farmers need to take control over three processes: farm inputs (such as fertilizer, seeds and livestock); marketing of the produce; and food processing to add value to the product. They also need a supply of credit to smooth out the seasonal variability in farm incomes (Birchall, 2004).

At least three obstacles exist for Ukrainian farmers, 1) limited goods and services, 2) low demand, and 3) corruption (Trueblood 2004). There are also three approaches to cope with competition, 1) cost leadership; 2) differentiation; and 3) focus—or niche (Porter & Scully, 1995).

ASCs achieve economies of size and cure smallness by endowing small individual farmers with the benefits of collective operational size; they assure access to supplies and markets for their members; and achieve market power through size. They offer increased bargaining power, shared costs, added value, access to new markets, risk aversion, purchasing power, and securing credit by pooling resources and marketing together, providing high technological services for agricultural production, sowing and cultivation of agricultural crops, harvesting, primary processing and preparation for selling. They overcome entry barriers including accessing distribution channels, economies of scale—in production, research, marketing and customer service (Porter & Scully, 1995). Cooperation involves local people, local issues, local businesses and government working together by using resources from within the community, focusing on its individual strengths and weaknesses. Farm problems resulting from the inelasticity of both supply and demand of agricultural products can be overcome with ASCs. Small

farms have to cooperate in marketing their produce, exploiting market power for better prices. Technical economies of scale associated with improvements in genetic resources—hybrids—can lead to higher yields and more efficient use of inputs.

“Cooperatives represent an extension of individual family farms allowing a combination of advantages of family governance with economies of large-scale production of required goods and services. The inter-organizational disadvantage of family governance, lying in their low market power in comparison to their up and downstream trading partners, is overcome by marketing, purchasing, and bargaining cooperatives and associations. These cooperatives also manage to capture the economies of large-scale business organization by retaining the economic and legal independence of their members...The transaction costs of governance in cooperatives may stay in reasonable limits. Members know and trust each other. Access and ability to productively use social capital represents a fundamental characteristic of both cooperative and family farm,” (Valentinov, V., 2006) p. 144.

The level of commercialization consistently increases with the increase in farm size; the proportion of output sold rises from less than 15 percent for the smaller farms of up to 1 hectare to 45-50 percent for farms of more than 100 hectares. “Farm operators adjust size over time through the land market—by buying, selling, renting—in order to increase the economic return to the farming operation” (Hanstad, 1998) p. 9. Production costs are lowest if an optimal farm size has been reached. Farm machinery reaches its lowest cost of operation per unit when applied to relatively large areas. Cooperative

machinery pools can relieve individual farmers from the pressure of purchasing their own equipment.

Hans Binswanger in his “Attitudes Towards Risk” concluded subsistence farm behavior is prone to risk adversity because the implications at stake are hunger and starvation if an unfavorable event were to occur (Binswanger, H., 1980). Subsistence farmers may not develop their business due to risk because risk both affects and is caused by subsistence agriculture. Farmers are in absolute control of their own livelihoods and are prone to production risks that cannot be buffered by functioning markets,” (Heidhues & Bruntrup, 1976). Farmers can use more factory processes and cooperatives to mitigate the risk effects to their output. Cooperation is a risk spreading device as well as transaction costs sharing. Subsistence producers may choose to remain in home production rather than wage labor because it represents longer term stability.

#### **2.1.5. Agricultural Service Cooperative Role in Community Based Development**

Communities gain strength through job production, payment of local taxes and community education. Agricultural or village/regional cooperatives can include producers, farm supplies, processing and marketing or provision of supplies. Value-added marketing, consumer cooperatives and ASCs cooperatives are equally important in the village setting.



The ASC answers to a group of individuals that have a common need for a product or service. ASCs can improve bargaining power/leverage, reduce costs—large quantity purchase of supplies to get a volume discount, gain market access or broaden opportunities. Cooperatives can increase the amount of consistent quality products that they sell and attract more buyers, improve product/service quality. Products can be enhanced through value-added processing or other available equipment and facilities that might not have been available to the producer without the cooperative. Cooperatives can obtain products/services not otherwise available (Rapp & Ely, 1996).

Failing to support the small farmer will have huge social and economic costs. Small farmers have the potential to generate strong linkages with the non-farm economy, which in turn will help others in the community. ASCs are more effective for solving community development issues—infrastructure—and provide an arena for the revival and development of the village social sphere. Poor farmers are more likely to spend any earnings locally, boosting the local economy. If their production increases, they may also hire additional labor, creating job opportunities as well as buying tools and other services locally. The new businesses and the jobs are more likely to stay in the village. ASCs can combine good financial returns, effective capitalization and product marketing strategies along with commitment to the local economy.

“Lack of collateral is a main obstacle to borrowing—after high interest rates and short term credit. Rural households rely much more heavily on equipment rentals and

jointly purchased machinery, presumably because of capital constraints” (Lerman, et al, 2007) p. 100.

ASCs are open to new members who can use the cooperative's services. An effective cooperative, with active members working together to solve mutual problems, is more likely to design its products and services based on the interests and needs of its members.

#### **2.1.6. Problems and Criticisms of Cooperatives**

Cooperatives have been misused by governments. Former Soviet countries fight against a poor image and manage the damage done by state control” (Birchall, et al, 2004). In Ukraine, the knowledge and awareness of cooperative opportunity is generally negatively shaded by the socialistic form of kolkhoze cooperatives from the past. In the soviet form of cooperation it was necessary that all farms take part and membership was compulsory. The members may have negative memories of the old Soviet cooperatives and have trust issues.

Some cooperatives have fallen under control of the more powerful member's misconceptions and unrealistic expectations regarding the cooperative's ability to exert power or improve their economic conditions by getting favorable prices. Cooperatives have appeal as an instrument of economic, social and cultural development. There are conflicting objectives that the cooperative is at times unable to fulfill: serving both socio-

political and economic goals ranging from self-help and participation to welfare; distribution of profits and outputs, and social control over resource allocation and mobilization.

On the member side, there may be lack of leadership, commitment, asking questions, attending meetings, understanding and communication. In Ukrainian agricultural service cooperatives, member equity is minimal and used for expenses. Some of the issues that occur with failures of cooperatives have to do with the lack of a mission statement, incompetent leadership or management in planning, vision, commitment and ability to implement plans.

“Cooperatives are known to have a horizon problem—members can capture benefits from their investment only over the time horizons of their expected membership in the organization—which causes a bias toward short-term investment and/or underinvestment; monitoring problem—decision problem—large number and heterogeneity of members in reaching a consensual decision” (Borgen, 2003) p. 95.

Many cooperatives face an incentive problem: there is a lack of adequate work incentives—either the spirit of enthusiasm or a system of labor organization and incentives capable of instilling necessity of hard work by all members. The equality of the members fostered leveling down to the lowest common denominator.

The Board of Directors may interfere or try to take control or may have been poorly selected. Bylaws or Articles of Incorporation may cause problems. Cooperatives are not open to buyouts or hostile takeovers—this can make management and boards lazy. The dependence of an elected board on management and its head on the people who elect them and the impossibility of expelling members as a disciplinary measure continue to undermine management's authority. The cooperative may not have the funding to hire competent management or consultants. There are issues that revolve around the feasibility and cost studies or lack of adequate financing or credit. Poor performance by the cooperative may find itself lacking anyone to pin the responsibility on, and the communication of the poor performance is often delayed.

One of the major reasons for poor performance of cooperatives is the inadequacy of its capital base and dependence on the government and other organizations. Access to credit is essential to raise capital.

Cooperatives can face the same problems as any business; incompetent directors and management, dissatisfied members, poor conduct at meetings, inadequate inventory, bad location, improper equipment, poor physical facilities, employee problems, nepotism, poorly conducted meetings, dissatisfied members.

### **2.1.7. Heifer Ukraine's Vision**

Heifer works with communities, through ASCs, local NGOs, and agricultural producers, and assists in the development of new rural associations by conducting trainings and networking. New types of assistance—small livestock farms, alternative animal production such as fish and bees—increase the Heifer Program's ability to help the most disadvantaged groups of society.

Heifer supports local projects by responding to requests for assistance and working through community based organizations to:

- educate community members, encourage and facilitate leadership development
- provide funding for appropriate high-quality livestock and agricultural supplies
- facilitate experience and knowledge exchange among rural families through passing on the gifts of livestock within and among projects (Heifer International, 2009).

Life in rural Ukraine revolves around the family. People who were not allowed to farm for themselves for more than a generation under United Soviet Socialist Republic rule are now rediscovering the farming techniques their parents were forced to forget.

Heifer supports numerous activities in rural areas. Heifer focuses on assisting disadvantaged rural communities, household plot owners—small subsistence farms—and farmer associations to improve their living standards and achieve sustainability through:

- providing pedigree livestock, training and technical assistance to enable communities to achieve food and income security
- building capacity and insuring long-term progressive change in participating communities, community groups, non-governmental organizations.
- promoting democracy and human values, gender equity and family harmony
- supporting local initiatives for improving the quality of life, clean and safe environmental conditions; improving healthcare (Heifer Ukraine, 2007)

According to the 2007 HPI Annual Report, ASC's Revenue by Activity was:

Milk collection	66.5%	\$33,091.50 USD
Threshing	12%	\$5,976.10 USD
Artificial insemination	4.7%	\$2,335.66 USD
Grain fodder grinding	3.1%	\$1,536.45 USD
Plowing	4.0%	\$2,001.99 USD
Other	9.7%	\$4,917.19 USD.

### III.

#### ***3.1 Design of the Study***

##### **3.1.1. Objectives**

The five HPI ASC projects have a number of common objectives:

1. **To** increase income 15-20 percent through the sale of dairy products, meat, honey and vegetables (Figure 3, 4,5,6,7)
2. To increase the number of cattle and pigs and to improve quality (Figure 3,4,6)
3. To improve knowledge and skills in husbandry, community development, marketing and entrepreneurship (Figure 3, 4, 6, 7)
4. To create a basis for sustainable development in the community (Figure 5, 7)

The current study was undertaken by analyzing HPI objectives their ASC projects:

#### **Tsentralnyi ASC 27-0848-01**

- I. By 2013, at least 58 needy families will have increased their income by 15% selling dairy products and meat.
- II. By 2012, the village communities will have increased number of purebred cattle and pigs in the local herd and improved the quality of available animals.
- III. By 2012, at least 58 project participants of the villages will have improved their knowledge and skills in husbandry, and community development

**Figure 3 Objectives Tsentralnyi**

#### **The “Olexandr Kodalov” ASC 27-0846-01**

- I. By 2012, at least 80 needy families will have increased their income by 15% selling dairy products, meat and honey.
- II. By 2012, the village communities will have increased the number of purebred cattle in the local herd and improved the quality of available animals.
- III. By 2012, at least 80 project participants of the village will have improved their knowledge and skills in husbandry, and community development.

**Figure 4 Objectives Olexandr Kodalov**

#### **“Nadia” ASC 27-0828-02**

- I. By 2012, the Avdiivka community members (80 families) will increase their incomes by at least 15% by selling milk products, meat and vegetables.
- II. By 2012, they will create a basis for sustainable development of the community.

**Figure 5 Objectives Nadia**

#### **“Perlyna” NGO 27-0839-01**

- I. By 2011, at least 70 needy families will have increased their income by 20% selling dairy products and meat.
- II. By 2011, the Mykolayivka village community will have increased the number of purebred cattle in the local herd and swine, as well as improved quality of available animals
- III. By 2011, at least 70 project participants of Mykolayivka village will have improved their knowledge and skills in husbandry, and marketing.

**Figure 6 Objectives Perlyna**



### **“Ivankovetskyi Svitanok” ASC 27-0829-02**

- I. By 2012, the community of Ivankivtsi (126) families) will have their incomes increased by at least 20% from selling surplus milk and meat products.
- II. By 2012, at least 126 project participants of Ivankivtsi village will have improved knowledge and skills in animal husbandry, entrepreneurship and community development
- III. By 2012 they will create a basis for sustainable development of the community.

**Figure 7 Objectives Ivankovetskyi Svitanok**

#### **3.1.2. Study Area**

The following Project Progress Reports were studied and evaluated:

Heifer Ukraine project ASCs, Nadia 27-0828-02 of Donetsk oblast, Tsentrainyi 27-0848-01 of Donetsk oblast, Olexandr Kodakov 27-0846-01 of the Chernihiv oblast, Ivankovetskyhi Svitanok 27-0829-01 of Kirivohrad oblast, and Perlyna NGO Irvis-M 27-0839-01 of Odesa oblast.

#### **3.1.3. Source of Data**

Primary Data:

The primary data is collected in Heifer's 2008 and 2009 project reports. Data collection is evaluated from a six-month Project Progress Report designed by Heifer International, which is completed by the Project Holder and reviewed by Heifer Project Coordinators and approved by the Ukraine Country Director.

Case studies from the Project Progress Reports include background information, current conditions of farms and agricultural service cooperatives. Data are observed, recorded and analyzed for stage of pattern in relation to internal and external influences. Heifer International Projects documents include: Project Progress Reports, Project Plan Updates, General Project Information, Project Story, Project Holder Comments, and Field Officer Notes.

The case study involves observation of five agricultural service cooperatives. Data collection includes interviews with Heifer staff and record searching.

#### Quantitative Methods

This analysis includes Project Progress Reports from five HPI that produce, collect and sell milk of ASC Ukraine projects.

#### Quantitative variables:

The breakdown of the analysis of milk volume/income impact, secondary farm-related income, home consumption nutritional value volume, number and community-based training is analyzed. All progress reports are from the year 2008/2009.

The multiple objectives, mixed methods and a generalized set of findings are reported in the narrative.

Interviews: Staff interviews involve less structured narratives with oral responses to questions or talking about their thoughts on agricultural service cooperatives and Heifer International Ukraine goals and missions.

Naturalistic observation: The local field context for the study, village life in Ukraine, is observed in its natural setting.

#### **3.1.4 Limitations**

A number of outside factors made it difficult to make conclusive statements concerning the findings. The non-availability of translators limited independent data gathering in the field to the already translated Heifer project reports. The varied and distant locations of projects limited access to individual project farms.

The topics identified for analysis below are determined by the information available in the reports. This exercise has begun the process of identifying some possible findings and raising questions and concerns that HPI might want to explore further through future evaluations. These are discussed below. The topics also highlight the need for determining a basic set of indicators to be used in evaluation and for standardizing the way evaluations are conducted and the results documented.

By the project's nature, there is not much consistency in what has been reported. The small sample of Project Progress Reports and comparative milk data affected this research. The original research was to conduct an analysis of specific milk production volume and the price of projects/programs and nutritional value increase through personal consumption, but since inadequate baseline statistics did not yield enough information, this was not a viable approach. The project progress reports were reviewed as they pertained to goals and objectives of the agricultural service cooperative as a tool for HPI community projects as a way of empowering farmers. There is not consistency across the reports in terms of what and how project holders report this data; the analysis is still based on a small sample drawn from reports that happened to mention the specific piece of information being discussed.

Project holders may not have reported data accurately because of their desire to please the Heifer representatives who supervised and controlled the projects. Lack of a control group of breed, age and seasonality of product for comparison of production volume makes it difficult to analyze sufficient data for validity. There were limited project statistics regarding milk production and sales.

### **3.1.5. Reporting Period**

2008/2009 six-month Project Progress Report

### **3.1.6. General Project Information/Project Holder Comments/Plan Update**

Original agricultural service cooperatives assisted, pass-on families assisted

Original Placements of Livestock and Other Resources, Pass-On Placement of Livestock  
and Other Resources, Livestock Health Issues, and Project Story

## IV.

### **4.1. Findings**

This chapter will assess the impact of the ASCs in the four domains set out in the research hypotheses:

1. ASCs increase the income and improve the standard of living of farmers of the village community.
2. ASCs increase nutritional consumption and decrease lack of access to food—assisting in compliance with Millenium Development Goal Number 1: to eradicate extreme poverty and hunger and, to reduce child mortality.
3. Heifer ASCs improve skills and training in animal husbandry and provide current information on production and marketing.
4. Heifer ASCs achieve through the “Cornerstones Plan” and elements of community-based participation and planning, empowerment of communities in order to develop and implement their own plans to build capacity and social capital through civic participation and democratic activities.

#### **4.1.1. Income/Livelihood Increases**

Millenium Development Goal #1: Eradicate Poverty and Hunger

Figure 10 establishes the income and livelihood increases for the individual cooperatives. Some projects show the Hrivnya amount increased per liter or the dollar value. The increase in consumption is usually shown in US dollars. These amounts are recorded as

average increases per family member in the cooperative. Additional sales of meat and honey added substantial income to families. Cooperative direct services such as mowing and artificial insemination earned additional income. Indirect services such as finding equipment, seeding common pastures, and alternative fundraising increased the potential benefits of future income.

AGRICULTURAL SERVICE COOPERATIVES			
INCOME/LIVELIHOOD INCREASES			
<b>Ivankovetskyi Svitanok - development of an efficient milk processing facility</b>			
Future milk processing facility with 4 additional communities contributing -			
milk price will be higher and can be regulated			
Defined potential suppliers of equipment			
Won government co-funding			
<b>"Olexandr Kodakov" - development of cattle breeding and beekeeping</b>			
Organized a cooperative for milk collection and cooling - increased bargaining power for price			
Used 750 kg of seed potatoes as incentive for cooperative membership drive			
Purchased 28 meters of pipe to connect the milk cooling tank			
Raised additional funds to purchase a site for a future cooperative bakery			
Sold 2110 liters of milk		2848.5	
		UAH	
consumed	846 UAH		(per family)
Sold 100 kg honey for		3000 UAH	
<b>"Perlyna" NGO - dairy cattle breeding</b>			
Sold 1298 liters of milk		2259 UAH	
consumed	1662 UAH		(per family)
<b>"Nadia" ASC - Improving welfare and employment rate through growth and sale of organic produce</b>			
Expanded to neighboring villages and increased membership			
Began organic farming and proving services			
<b>"Tsentralnyi" ASC - Development of livestock breeding</b>			
Moved its home to a new office facility			
Secured 44 hectares of lands for community pasture			
Rented a tractor to gather hay /cut and stored hay for the winter			
Provided hay procurement services for		\$7022 UAH	
60 piglets	were sold at the market for an average of	600 UAH	
	average income increase per family	624 UAH	

**Figure 846 Income and Livelihood Increases**

#### **4.1.2 Education and skills training, Technical information**

One hundred sixty-two farmers were trained in farming related topics ranging from animal husbandry—sheep, pig, cow—infertility and mastitis, diseases, prevention and first aid, manure management, community pasture management, vermiculture and organic production along with agroecology. In addition, seventy-nine farmers received training on cooperatives: marketing and development, accounting and reporting, principals of cooperative activity. There were thirty-nine participants in the Heifer Cornerstones value-based development for pass-on recipients, gender integration and general project opening trainings.

##### **Intermediary goals—trainings held:**

ACS trainings were held on an as-needed basis within the individual cooperatives. The subjects were appropriate to the needs of the farmers and included animal husbandry, organic farming, vermiculture, and pastures along with principles and values of cooperatives, marketing and accounting, and cooperative development. The number of attendees and topics can be found in Figure 16.



## FARM-EDUCATION TRAINING

FARMING EDUCATION-SKILLS	Attendees
Effective reproduction in milk, hygiene & milk production(2)	2
Diseases of newborn calves and piglets	15
Animal diseases prevention	15
Manure management	1
Diseases and first aid measures to animals	22
Gender analysis	17
Cow infertility: reasons and treatment	17
Agroecology 101	2
Cow mastitis: reasons, treatment and prophylaxis	20
Vermiculture training (2)	3
Vermiculture and organic production	8
Sheep breeding, reproduction and veterinary	22
Management of community pastures training	18
	162

**Figure 915 Trainings**

### 4.1.3. Community Based Participation and Social Capital

Community-based participation, planning and empowerment of communities to develop and implement plans, building sustainability, capacity and social capital through civic participation and democratic activities were achieved by the ASCs.

One way to measure the success of the ASC is by how well they address the needs of member-stakeholders. Building skills, participation, trust and loyalty of the community members can be seen in the topics of the trainings held and the increase of participation and ASC membership. Figure 16, Cooperative/Entrepreneurship Training, shows the ASC has given back to the community by increasing the sustainability of the village, empowering small farmers and creating local jobs. Roundtables on cooperatives, marketing and cooperative development, principles of cooperative activity and

accounting and reporting for the ASC were held and attended by 79 farmers. The farm community is very tightly built, people are responsible, intelligent and willing to try new things and implement innovative approaches. Four new cooperatives modeled on the Ivankovetskyi Svitanok ASC will promote cooperation in the Znamyanka raion.

## COOPERATIVE/ENTREPRENEURSHIP TRAINING

Round table on agricultural service cooperatives (3)	5
Marketing & cooperative development (2)	40
Principals of cooperative activity	31
Accounting and reporting for the ASC (2)	3
<div style="border: 1px solid black; padding: 5px; text-align: right;"> TOTAL 79 </div>	

**Figure 16 Cooperative/Entrepreneurship Training**

### 4.1.4 Nutrition and Food Security

Enhanced food security is increased through more efficient production gained through purchase of capital equipment.

Food security has been enhanced through both farm inputs provided by HPI to farmers. Through the provision of livestock, seeds, farm equipment and machinery, not only are incomes from production increased, but the amount of food available for storage is increased, thus enhancing food security. 10 bee packages, 20 ewes, 2 rams, 10 gilts, and 10 heifers were placed on ASC farms.

Purchases of production equipment, (mower, grinder, hay cutter, plough, sower, and manure spreader, and cultivator) provided immediate income production, adding jobs and securing income and crops in the future.

#### Original placements of livestock and other resources

##### SEED

Fertilizer	\$252
Feeds	\$500
Mixed feeds	\$123
Perennial seeds	\$17,000
Vegetable & Potatoes	\$15,294
Seed Potatoes	750kg \$6581

##### LIVESTOCK

Bee Packages	10
Ewe	20
Ram	2
Sperm	\$273
Veterinary drugs	\$550 \$478

##### EQUIPMENT

Mower	1
Grain Grinder	1
Hay cutter	1
Attachable hay mower	1
Plough "PLN-3.35"	1
Vegetable sower	1
Cultivator	1
Manure spreader	1

| Figure 1017 Farm inputs provided

#### Original Families Assisted and Pass-on Families assisted.

Pass-on of livestock offspring is an important part of the Heifer mission. Sustainability of the village and farm is attained and food security increased through the passing on of offspring to another needy family in the village. The pass-on families planned through these five ASCs total 207 animals passed to other families. The following Project Progress Reports, (Figure 18), show the number of original families

assisted for this period, previous periods, and all periods, the number of pass-on families assisted, planned, new and total for all periods.

Figure 19 shows that the percentage increase of “Previous Total” to “New This Period” is 81.818 percent and the percentage increase from “New This period” to “Planned” is 72.5 percent.

**Ivankovetskyi Svitanok 2009 (Phase 2)**

**Original Families Assisted**

Planned 63  
New (This period) 40  
Previous total  
Total (All periods) 40

**Pass-on Families assisted**

Planned 63  
New (This period)  
Previous Total  
Total (All periods)

**Olexandr Kodakov**

**Original Families Assisted**

Planned 40  
New (This period) 37  
Previous total 44  
Total (All periods) 81

**Pass-on Families assisted**

Planned 40  
New (This period) 0  
Previous Total 0  
Total (All periods) 0

**Tsentralnyi**

New Income in cooperative from hay mowing \$7,022 –

**Original Families Assisted**

Planned 29  
New (This period) 12  
Previous 38  
Total (All periods) 50

**Pass-on Families assisted**

Planned 29  
New (This period) 0  
Previous Total 0  
Total (All periods)

**Nadia (Phase 2)**

**Original Families Assisted**

Planned 40  
New (This period) 31  
Previous total  
Total (All periods)

**Pass-on Families assisted**

Planned 40  
New (This period)  
Previous Total  
Total (All periods)

**Perlyna**

**Original Families Assisted**

Planned 35  
New (This period) 0  
Previous Total 20  
Total (All periods) 20

**Pass-on Families assisted**

Planned 35  
New (This period)  
Previous Totals  
Total (All periods)

**Figure 1118 Original & Pass-On Families Assisted**

		Families Assisted			
		PLANNED			TOTAL
Ivankovetskyi S.	Ol. Kodakov	Tsentrалnyi	Nadia	Perlyna	
63	40	29	40	35	207
		NEW			
40	37	12	31	0	120
		PREV. TOTAL			
-	44	38	-	20	66
		TOTAL (all)			
40	81	50	-	20	191

		Pass-on Families assisted			TOTAL
Ivankovetskyi S.	Ol. Kodakov	Tsentrалnyi	Nadia	Perlyna	
63	40	29	40	35	207

**Figure 1129 Total Families Assisted**

#### 4.1.5. . Project Objectives and Results

Positive results of the common objectives and their successful implementation are outlined below.

#### **Narrative of Productive Trends**

Positive trends for the five HPI ASCs—Figure 20, 21, 22, 23, 24—included: a milk processing enterprise opened for 126 ASC members, a milk truck was purchased, price of sold milk increased by 0.20 UAH per liter, honey was produced, consumed and sold, 44 hectares of community pasture planted and harvested, pig breeding produced 190 offspring for the farm and pass-on, 10 gilts and 10 heifers were purchased, a purchase of 15 heifers was planned but delayed due to lack of fodder resulting from previous drought conditions, a community veterinary center was established, research was accomplished on searching for select cattle for breeding, and an artificial insemination point was

repaired for the development of animal breeding. Organic farming equipment was purchased to implement phase II of the organic farming process.

Co-funding from the government has been secured by two ASCs, alternative funding sources have been researched, money has been allocated to purchase additional equipment and was selected as a model cooperative, and one cooperative has applied for a loan to purchase additional milk processing equipment.

ASC membership base increased in four ASCs, and a new cooperative was registered.

**“Ivankovetskyi Svitanok” ASC 27-0829-02**

- **OBJECTIVE: By 2012, community of Ivankivtsi (126) families) will have incomes increased by at least 20% from selling surplus milk and meat products.**
- **RESULT:** Potential suppliers of equipment were defined, premises for equipment were found. The cooperative won tender on co-funding in the amount of \$110000 from oblast budget and \$23000 from raion budget.
- **OBJECTIVE: By 2010, at least 126 project participants of Ivankivtsi village will have improved knowledge and skills in animal husbandry, entrepreneurship and community development.**

- **RESULT:** Three trainings were conducted, including two trainings in marketing, community and cooperation development and one in HPI Cornerstones. In addition a cooperative general meeting was conducted.
- **OBJECTIVE:** By 2012, create a basis for sustainable development of the community.
- **RESULT:** Contributed to forming four new cooperatives on the basis of “Ivankovetskyi Svitanok” ASC. Their development will promote cooperation in Znamyanka raion.

Figure 20 Results Ivankovetskyi Svitanok

#### **The “Olexandr Kodalov” ASC 27-0846-01**

- **OBJECTIVE:** By 2012, at least 80 needy families will have increased their income by 15% selling dairy products, meat and honey.
- **RESULT:** The average milk yield was 737 liters/6 months per heifer. The volume of milk sold was 2110 liters, which generated 2848.5 UAH in income (\$370). The cost of consumed milk is 846 UAH (\$110) per family. From the 10 bee packages community members got a total of 200 kg of honey, of these 100 kg were sold for a profit of 3,000 UAH (\$390). Equipment purchase will allow cooperative members to procure feed for a cheaper price, thus saving money.
- **OBJECTIVE:** By 2012, the village communities will have increased number of purebred cattle in the local herd and improved quality of available animals.

- **RESULT:** The local AI center is working at full efficiency. The project veterinary specialist is also a specialist in artificial insemination and he personally oversees the insemination activities. Many of the originally donated animals are currently giving births to their second calves.
- **OBJECTIVE:** By 2012, at least 80 project participants of the village will have improved knowledge and skills in husbandry, and community development.
- **RESULT:** Project veterinary specialist attended training on “Effective reproduction in milk cows. Cow hygiene and production of high quality milk.” The project leader attended a round table on cooperative development. There is an upcoming training on growing potatoes.

Figure 21 Results Olexandr Kodolov

#### **Tsentrалnyi ASC 27-0848-01**

- **OBJECTIVE:** By 2013, at least 58 needy families will have increased their income by 15% selling dairy products and meat.
- **RESULT:** The average increase in income per family for heifer recipients was 4,377 UAH (\$568). In this period, 24 pigs produced 190 offspring. Of these, 130 were kept by their owners to feed their own family, to grow as POG and to expand their own herd. Sixty piglets were sold at the market for an average of 600 UAH (\$78) per piglet. The average income per family was 4,805 UAH (\$624). The ASC purchased an attachable hay mower and a hay cutter. Hay of



cooperative members from a common 44 hectare pasture has been cut and stored for winter.

- **OBJECTIVE: By 2012, at least 58 project participants of the villages will have improved knowledge and skills in husbandry, and community development.**
- **RESULT:** In this reporting period, 59 people attended training organized within the framework of the project on animal husbandry, finance, vermiculture, and community pastures, among others. More people will continue to attend training in the course of the project.
- **OBJECTIVE: By 2012, the village communities will have increased number of purebred cattle and pigs in the local herd and improved quality of available animals.**
- **RESULT:** The 24 swine in the community produced a total of 190 piglets. Of these 81 were male and 109 were female. Most community members have kept several of the offspring for themselves to ensure the quality of available animals and to pass on to new families.

Figure 22 Results Tsentralnyi

**“Nadia” ASC 27-0828-02**

- **OBJECTIVE: By 2012, the Avdiivka community members (80 families) will increase their incomes by at least 15% by selling milk products, meat and vegetables.**

- **RESULT:** 20 original sheep and 2 rams are provided to 20 families. 13 families received vegetable seeds from Heifer. Cooperative planted vegetables on the areas, where the first stage of certification was conducted. Equipment for organic farming and proving services were purchased and put into operation. Equipment included a plough, cultivator, manure spreader and vegetable sower.

**Figure 23 Results Nadia**

#### **“Perlyna” NGO 27-0839-01**

- **OBJECTIVE:** By 2011, at least 70 needy families will have increased their income by 20% selling dairy products and meat.
- **RESULT:** Ten heifers were provided to rural families. Average milk yield was 2426 liters/6 months per heifer. The volume of milk sold was 1298, which generated 2259 UAH in income (\$452). The cost of consumed milk is 1662 UAH (\$332) per family.
- **OBJECTIVE:** By 2011, the Mykolayivka village community will have increased the number of purebred cattle in the local herd and swine, as well as improved the quality of available animals.  
  
**RESULT:** Artificial insemination point was repaired and equipped; provided sperm of high quality.
- **OBJECTIVE:** By 2011, at least 70 project participants of Mykolayivka village will have improved their knowledge and skills in husbandry, and marketing.
- **RESULT:** 6 trainings were delivered for project participants.

**Figure 24 Results Perlyna**

## **Field Office Comments**

Comments relating to the six month period's status of progress in completion of objectives, expenses, income and events of the project are related by the project holder and reviewed by the HPI staff for the five HPI ASC projects.

**Ivankovetskyi Svitanok:** According to project holder, Valentyn Lutsenko, "The project is successful. All objectives are completed according to the project plan—Valentyn Lutsenko, reviewed by Yuriy Bakun

**Olexandr Kodakov ASC:** Leonyd Berdychevskyy, Project holder, claims, "The project is developing very well."—Leonyd Berdychevskyy, reviewed by Anna Pidgorna

**Tsentralnyi ASC:** According to project holder Volodymyr Omelchenk, "this is one of the most successfully developing projects in Eastern Ukraine."—Volodymyr Omelchenk, reviewed by Anna Pidgorna

**Nadia ASC:** Project holder, Halyna Illiash states, "The project is successful."—Halyna Illiash, reviewed by Yuyiy Bakun

**Perlyna NGO:** The project holder is very active and has big potential—Svitlana Petrenko, reviewed by Vladyslav Karpenko.

V.

### ***5.1. Recommendations***

Encouragement of cooperation is a key to economic progress and improvement of village livelihoods. The Ukrainian government should develop policies that facilitate the creation of agricultural service cooperatives as alternatives to subsistence farming as a coping strategy.

On the basis of my observations in Ukraine, agricultural service cooperatives are the answer to many of the economy of scale problems of remote village areas. They are one of the only lifelines available to and controllable by the subsistence farmer. They allow natural and man-made risks to be shared. They allow farm net income to increase through economizing transaction costs both upstream and downstream because the production unit of the subsistence farm is limited by the size of the family. Agricultural Service Cooperatives are an extension of the family and combine advantages of economies of scale and governance. Agricultural Service Cooperatives also provide many village support functions and thereby produce social capital ensured by family and community relationships while instilling the values and principles of cooperation. Farm consumption and nutrition increase. New skill sets are learned, and technological expertise is gained both in agricultural and business.

Rural development and diversification of non-agricultural employment in rural areas must be encouraged to end the countryside's dependence on single, cyclical

business. This diversification could involve promotion of small scale agro-processing—packaging, preserving, drying and further processing, distribution and marketing of agricultural products—milk collection and storage, increased supply and marketing of agricultural inputs, delivery, sales and repair of farm machinery and spare parts—tractors and combine services and training, marketing and transportation services. Non-farm economic services to the rural communities such as, transport services, retail stores, petty commerce and trade, hair dressing, shoe repair, communication services—telephone, Internet, bakeries, cafes, rural doctors, social and cultural services that could involve both the farm and private sector such as health, kindergartens, theaters and other cultural facilities should also be encouraged. “Rural households in developing countries typically receive 30-35 percent of their income from off-farm sources. The competitiveness of the agricultural sector cannot be increased without the development of the industrial, commercial and service sectors that characterize modern agriculture” (Bright, Davis, & Janowski, 2000) p. 16.

A top policy priority is allowing farms to increase their size. Land sales and bankruptcy should be allowed. There is an immediate need to strengthen land transfer laws. Awareness of the new global land grab triggered by today’s food and financial crisis is imperative. Food insecure governments that rely on imports to feed their people are buying and leasing vast areas of farmland for their own offshore food production. Food corporations and private investors, looking for profits in the midst of the financial crisis, see investment in farmland as an important new source of revenue. Fertile

agricultural land is becoming increasingly privatized and concentrated. This land grab could harm small-scale farming, and rural livelihoods.<sup>2</sup>

Ukraine's regulatory environment should be standardized and procedures that are obstacles to entrepreneurship, trade, investment and ongoing business removed. Policies should aim at reducing transaction costs; improving stability in farm input and output markets, particularly those relevant to survival; supporting reliable finance; and providing a climate for investments and social security development. Access to value-adding processes such as storage, processing, milling, packaging, distribution and finally to retail markets that farmers are dependent on should be secured. Farm policies need to be developed to encourage a slower pace of exit of rural unemployed to Ukraine's cities. Exports—including subsidized exports— should be promoted allowing more production and keeping more people employed in the sector. A review of farm taxation policies should take place.

Increased extension services available in each raion should be accommodated and university agricultural programs instituted and promoted.

---

<sup>2</sup> Russian Renaissance Capital has acquired rights to 300,000 hectares of Ukrainian farmland already (Bokhari, Ashfak, 2009). Earlier this year, the Libyan government struck a land deal with Ukraine under which Ukraine got an oil and gas contract and Libya was given access to 100,000 hectares of land to produce its own food. Libya is still considering up to 300,000 additional hectares. (Anon, 2008, Seized! [www.grain.org](http://www.grain.org)).

## VI.

### **6.1. Conclusion**

Not only did family income and nutritional consumption increase, but animal husbandry, hygiene and production skills were learned by the farmers. Cooperative members held Round tables at ACSs with the outcome of increasing cooperative membership, marketing and finance. Cooperative members gained civic and political empowerment and built social capital as ASC members recognized how to solve community problems through cooperation and participation.

Cooperative activity is a method to decrease rural unemployment and its significant social and economic problems, decrease rural-urban migration, decrease rural poverty and increase the local tax base. The creation of income alternatives in rural areas through agricultural service cooperatives is a step in the right direction for overcoming hardships in subsistence agriculture.

There is a lack of sufficient historical data on milk production and sales to ascertain a degree of increase in income. Therefore, the hypothesis that agricultural service cooperatives increase the net income and nutritional value of milk consumed by 15-20 percent cannot be proven. By the end of FY 2007, the number of ASC members reached 1,351 – 32% higher than it was by the ending membership of 1,028 for FY 2006, (Heifer Ukraine Annual Report, 2007)

Through Ukrainian villages and agriculture, I have come to have a deep appreciation for the personal independence that can be achieved and life fulfilled through a simple instrument, the subsistence farm. Independence as self-provisioning is one way for people searching for ways to regain control of the means of their own subsistence, the resources to produce food and satisfy other “limited concrete needs.” There is a demand for meaningful work that links production to consumption. The Ukrainian village is the “soul” of Ukraine and should be preserved and assisted. Contemporary society judges success by large-scale organizations. The goals and achievements of the subsistence farmer are not judged by on the same standards, nor should they be. Marginal farming performs important welfare and food security roles in rural areas. Small farmers have the potential to generate strong linkages with the non-farm economy, which in turn will help others in the community. Poor farmers are more likely to spend any earnings locally, boosting the local economy. If their production increases, they may also hire additional labor, creating job opportunities as well as buying tools and other services locally. Furthermore, some traditional farming methods used by smallholder farmers help preserve biodiversity and traditional knowledge of food and plants, both of which are vital for future food supplies (Bruntrup & Heidhues, 2002).

We need to take into account the resource constraints, institutional and infrastructure limitations and cultural values for this sector to succeed. Technological and institutional options should be designed to serve their objectives. “Many scientists argue that it cannot be a problem because if it were inefficient, it would not exist” (Borodina, et al, 2003). Subsistence-style agriculture reduces food insecurity and fulfills



social obligations. It is a functional livelihood strategy. If there were a lack of food, food would need to be imported..Subsistence farmers are making use of available resources to sustain their households, in a way that is socially valued and historically valued. Subsistence becomes an opportunity, rather than a problem and it plays an important role in stabilizing fragile economies. Subsistence farmers should be given a voice through the agricultural service cooperative lobby and represent their interests.

## 6.2. Lessons Learned

The value of a common language can never be taken for granted.

“Effective communication and successful negotiations with a foreign partner—whether with a partner in peacekeeping, a strategic economic partner, a political adversary, or a non-English speaking contact in a critical law enforcement action—requires strong comprehension of the underlying cultural values and belief structures that are part of the life experience of the foreign partner”—Dr. Dan Davidson, President of the American Councils on International Education.

Intermediate Russian or Ukrainian language was not in my grasp. Accordingly, not having the ability to communicate with project holders and understand the culture limited my access to pertinent information. This lack of communicative skills could possibly have led to mistrust and misunderstandings, an inability to cooperate, compromise and offer and receive insights into farmer’s perspectives. In my opinion,

development workers should have regional knowledge and language skills and knowledge of the local culture prior to employment. One year is not enough time to learn conversational Russian or Ukrainian. The learning curve is too steep to sort out the job and have cultural understanding about the country. The talent, English language skills and competent experience of the Heifer Ukraine office and their untiring willingness to assist were critical to the completion of this study.

Baseline statistics form a necessary component to statistical measurement success. Project historical statistics were not available. To precisely target milk production volume and nutritional consumption values, the projects require compatible project statistics allowing the beginning figure price per liter, increase in production volume per liter, age of heifer, etc. Feed information would be helpful to add in for comparison. A count of the entire herd and breed or breeds would also be helpful. Industry standards of milk fat content could also be compared if that were available.

One project leader noted that the milk factory was not compliant with the contract signed with the ASC; this was leading to member dissatisfaction over when payment was received as it became slower each month with no explanation. The lack of viable legal alternatives left the ASC with limited options in finding another willing purchaser.

Field work would often require overnight trains and considerable time to visit projects that were occurring in distant and varied locations around the country. Considerable time is needed to accompany Heifer staff and their schedules on field trips

and excursions to the villages in order to have capable translation processes and informational access.

## Appendix I, General Project Information

"Ivankovetskyi Syitanok" ASC 27-0829-02				
General Project Information				
Original Families assisted:				
	No. of Families	Pass-on Families assisted		
Planned	63	Planned	63	
New (this period)	40	New (this period)	0	
Previous Total	0	Previous Total	0	
Total (All periods)	40	Total (All periods)	0	
Comments:		Comments		
Original Placements of Livestock and Other Resources				
Resource Type	Planned	New	Previous	Total
Comments: No animal purchase is foreseen by this project. Equipment is expected to be purchased next reporting period due to delay with co-funding from oblast and raion budgets. Equipment from Heifer project budget will be bought at the same time.				

The "Olexandr Kodakov" ASC 27-0846-01

General Project Information			
Original Families assisted:		Pass-on Families assisted	
	No. of Families		
Planned	40	Planned	40
New (this period)	37	New (this period)	0
Previous Total	44	Previous Total	0
Total (All periods)	81	Total (All periods)	0
Comments:		Comments	

Original Placements of Livestock and Other Resources				
Resource Type	Planned	New	Previous	Total
Bee Packages	20	10	10	20
Vet. Drugs	\$1,860	\$550.00	\$960	\$1,520
Fertilizers	\$1	80 ton \$252	\$600	\$852
Feeds	\$1,620	2 ton (\$500)	\$540	\$1,040
Seed potatoes	-	750kg	0	750kg
Mower	1	1	0	\$1
Grain grinder	1	1	0	\$1

Comments: 720 kg of seed potatoes were distributed among project participants. The remaining 30 kg were rotten potatoes that were thrown out. Vet drugs are being used to treat animals and also for preventative care on an as needed basis.

"Nadia" ASC 27-0828-02

**General Project Information**

**Original Families assisted:**

	No. of Families		Pass-on Families assisted
Planned	40	Planned	40
New (this period)	31	New (this period)	0
Previous Total		Previous Total	0
Total (All periods)		Total (All periods)	0
Comments:		Comments	

**Original Placements of Livestock and Other Resources**

Resource Type	Planned	New	Previous	Total
Ewe	20	20	0	20
Ram	2	2	0	2
Vegetables & potato seed	28182	15294	0	15294
Plough	1	1	0	1
Vegetable sower	1	1	0	1
Cultivator	1	1	0	1
Manure Spreader	1	1	0	1

Comments: To purchase 960 kg of potato seeds 6581 UAH were spent

"Perlyna" NGO 27-0839-01

**General Project Information**

**Original Families assisted:**

	No. of Families		Pass-on Families assisted
Planned	35	Planned	35
New (this period)	0	New (this period)	0
Previous Total	20	Previous Total	0
Total (All periods)	20	Total (All periods)	0
Comments:		Comments	

**Original Placements of Livestock and Other Resources**

Resource Type	Planned	New	Previous	Total
Heifer	25	-	10	10
Gilts	10	0-	10	10
Mixed fodder	3000 kg	-	500	500
Veterinary drugs	200	200	0	200
Mineral fertilizers	1350	1350	0	1350
Alfalfa seeds	1250	1250	0	1250
Refrigerator/cooler	1	-	1	1
PC	1	-	1	1
Office Equipment	1	-	1	1

Comments:

**General Project Information****Original Families assisted:**

	No. of Families	Pass-on Families assisted	
<b>Planned</b>	29	<b>Planned</b>	29
<b>New (this period)</b>	12	<b>New (this period)</b>	0
<b>Previous Total</b>	38	<b>Previous Total</b>	0
<b>Total (All periods)</b>	50	<b>Total (All periods)</b>	0
<b>Comments:</b>		<b>Comments</b>	

**Original Placements of Livestock and Other Resources**

Resource Type	Planned	New	Previous	Total
Perennial seeds	17000	2987	0	2987
Hay cutter	1	1	0	2
Attachable hay mower	1	1	0	1
Mixed feeds	1760	123	560	683
Veterinary medicines	1870	478	945	1423
Sperm	900	273	380	653

**Comments:** Seeds were planted on a community pasture (44 hectares). The crop received was then available for all project participants. Veterinary medicines (mineral nutrients for cows) were distributed equally among heifer owners. The rest of the medicines are being stored in the cooperative's veterinary center. Sperm is being stored at the AI center and used as needed.

## REFERENCES

- Agricultural and Rural Investment Strategy. (2005). *Ukraine*. Agricultural and Rural Investment Strategy (ARIS).
- Binswanger, H. (1980). Attitudes Towards Risk: Experimental Measurement in Rural India. *American Journal of Agricultural Economics* , Vol. 62.
- Birchall, J. (2004). *Cooperatives and the Millennium Development Goals*. International Labor Organization.
- Borgen, S. (2003). Rethinking Incentive Problems in Cooperative Organizations. *Journal of Sociology* , 95.
- Borodina, E., & Borodina, A. (2007). Transformation of Agricultural Sector of Ukrainian Economics: Some Social and Economic Results. *Agricultural Economics and Transition: What was expected, what we observed, the lessons learned*. Budapest, Hungary: Corvinus University of Budapest: Institute For Economics and Forecasting, National Academy of Sciences of Ukraine.
- Bright, J., Davis, J., & Janowski, M. (2000). *Rural Non-Farm Livelihoods in Central and Eastern Europe and Central Asia and the Reform Process*. NRI.
- Bruntrup, J. M., & Heidhues, F. (2002). *Subsistence Agriculture in Development: Its Role in Processes of Structural Change*. Germany: Center for Tropical Agriculture: Universitat Hohenheim Institute of Agricultural Economics and Social Sciences.
- Central Intelligence Agency. (2008). *The World Factbook - Ukraine*. CIA.
- Chayanov, A. (1966). *The Theory of Peasant Co-operatives*. Homewood, Illinois: American Economics Association by Richard D. Irwin.

Hanstad, T. (1998, February). *Are Smaller Farms Appropriate for Former Soviet Republics?* Rural Development Institute.

Heidhues, T., & Bruntrup, M. (1998). *Change a Permanent Phenomena in Agriculture*. European Review of Agricultural Economics.

Heifer International. (2009). *Annual Report 2009*. Heifer International.

Heifer International Ukraine. *Progress Report, Project No. 27-0828-02 "Nadia" ASC*.

Heifer International Ukraine. *Progress Report, Project No. 27-0839-01, "Irvis-M" ASC*.

Heifer International Ukraine. *Progress Report, Project No. 27-0846-01, "The "Olexandr Kodakov" ASC*.

Heifer International Ukraine. *Progress Report, Project No. 27-0848-01, The "Tsentralnyi" ASC*.

Heifer International Ukraine. *Progress Report, Project No. 28-0829-01, "Ivanskovetskyi Svitanok" ASC*.

Heifer International Ukraine. *Progress Report, Project No. 28-0838-01, Babanka Orphanage*.

Heifer Ukraine. (2007). *Annual Report*. Kiev: Heifer Ukraine.

Lerman, Z. (2001). *Institutions and Technologies for Subsistence Agriculture: How to Increase Commercialization*. Jerusalem: The Hebrew University of Jerusalem, The Center for Agricultural Economic Research, Department of Agriculture.

Lerman, Z., & Csaki, C. (2000). *Europe and Central Asia Environmentally and Socially Sustainable Development Series*. World Bank.



Lerman, Z., & Sedik, D. (2007). *Studies on Agricultural and Food Sector in Central and Eastern Europe: Rethinking Agricultural Reform in Ukraine*. IAMO - Institut für Agrarentwicklung in Mittel-Und Osteuropa.

Magmedov, V. (1999). *Groundwater Impact Assessment in Rural Areas of North - Eastern Part of Ukraine*. Budapest: Open Society Institute.

Namken, J. (1999). *Restocking the Breadbasket: Rural Cooperatives*. USDA Natural Resources Conservation Service.

Porter, & Scully. (1995). The Future of US Agricultural Cooperatives. *American Journal of Agricultural Economics* .

Rapp, G. &. (1996). *How to Start a Cooperative*. USDA.

Rodrigues, R. (2000). Decent Work: Can Cooperatives Make a Difference. *COPAC Open Forum*. COPAC.

Trueblood, M. (2004). Measurement and Explanation of Technical Efficiency Performance in Ukrainian Agriculture. *Journal of Agricultural and Applied Economics* .

Ukraine, S. S. (2004). *Statistics*. Government Publication.

UN. (2003ba). *World Development Report*. United Nations.

United Nations. (2010). *Millenium Development Goals Report*. United Nations.

US & Foreign Commercial Service & US Department of State. (2006, August 15). Doing Business in Ukraine: A Country Commercial Guide for US Companies. *Doing Business in Ukraine: A Country Commercial Guide for US Companies* . US & Foreign Commercial Service and US Department of State.

Valentinov, V. (2004). Organizational Nature of Agricultural Cooperatives. *Journal of Rural Cooperation, Halle, Germany* , 33(2): 139-151.

von Cramon-Taubadel, S., Zorya, S., & Striewe, L. (2001). *Policies and Agricultural Development in Ukraine*. German Advisory Group on Economic Reform with the Government of Ukraine .

World Bank. (2008). *Country Partnership Strategy for Ukraine*. World Bank.

World Bank. (2000). *World Bank Country Report, Ukraine (b)*. World Bank.



# Windows XP

## Printer Test Page

congratulations!

If you can read this information, you have correctly installed your TOSHIBA es850/853Series PCL6 on KASTONE.

The information below describes your printer driver and port settings.

submitted Time: 12:13:13 PM 8/2/2010  
Computer name: KASTONE  
Printer name: TOSHIBA 720  
Printer model: TOSHIBA es850/853Series PCL6  
Color support: No  
Port name(s): Toshiba 720  
Data format: RAW  
Share name:  
Location:  
Comment:  
Driver name: eB8mx3.dll  
Data file: eB8mx.pdf  
Config file: eB8mx3ui.dll  
Help file: eB850XL.chm  
Driver version: 11.30  
Environment: Windows NT x86

Additional files used by this driver:

C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx3wm.exe (11.30)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2.XPI  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCDTP.dll (1.0.0.1)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCIP.dll (1.0.0.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDL.chm  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxuc.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxeu.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxjp.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCVa1.xml  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2pr.gxl  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPrc.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esTSPVen.lbf  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCCFG.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPCF.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLDLG.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDL.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esT3snm.dll (3.1.2.0)

This is the end of the printer test page.



# Windows XP

## Printer Test Page

congratulations!

If you can read this information, you have correctly installed your TOSHIBA es850/853Series PCL6 on LYNCHAN.

The information below describes your printer driver and port settings.

Submitted Time: 12:39:17 PM 8/2/2010  
Computer name: LYNCHAN  
Printer name: TOSHIBA 720  
Printer model: TOSHIBA es850/853Series PCL6  
Color support: No  
Port name(s): Toshiba 720  
Data format: RAW  
Share name:  
Location:  
Comment:  
Driver name: eB8mx3.dll  
Data file: eB8mx.pdf  
Config file: eB8mx3ui.dll  
Help file: eB850XL.chm  
Driver version: 11.30  
Environment: windows NT x86

### Additional files used by this driver:

C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx3wm.exe (11.30)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2.XPI  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCDTP.dll (1.0.0.1)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCIP.dll (1. 0. 0. 0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLd.chm  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxuc.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxeu.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxjp.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCVal.xml  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2pr.gxl  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPrc.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\estSPVen.lbf  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCCFG.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPCF.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLdLG.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLd.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\est3snm.dll (3.1.2.0)

This is the end of the printer test page.



# Windows XP

## Printer Test Page

Congratulations!

If you can read this information, you have correctly installed your TOSHIBA es850/853Series PCL6 on EKAMENDA.

The information below describes your printer driver and port settings.

Submitted Time: 12:58:48 PM 8/2/2010  
Computer name: EKAMENDA  
Printer name: TOSHIBA 720  
Printer model: TOSHIBA es850/853Series PCL6  
Color support: No  
Port name(s): toshiba 720  
Data format: RAW  
Share name:  
Location:  
Comment:  
Driver name: eB8mx3.dll  
Data file: eB8mx.pdf  
Config file: eB8mx3ui.dll  
Help file: eB850XL.chm  
Driver version: 11.30  
Environment: windows NT x86

Additional files used by this driver:

C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx3wm.exe (11.30)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2.XPI  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCDTP.dll (1.0.0.1)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCIP.dll (1.0.0.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLD.chm  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxuc.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxeu.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mxjp.bin  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCVal.xml  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mx2pr.gxl  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPrc.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esTSPVen.lbf  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mCCFG.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\eB8mPCF.dll (4.4.79.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLDLG.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esPDLD.dll (3.1.109.0)  
C:\WINDOWS\System32\spool\DRIVERS\W32X86\3\esT3snm.dll (3.1.2.0)

This is the end of the printer test page.