

Final Report

**AN ASSESSMENT
of
TECHNOLOGY TRANSFER and INFORMATION NETWORKING
in
KOSOVO**

Prepared for

**U.S.A.I.D.
Prishtine, Kosovo**

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ACRONYMS

| | |
|---------|--|
| ABK | American Bank of Kosovo |
| ABU | Agricultural Business Unit |
| AI | Artificial Insemination |
| AKA | Alliance for Kosovo Agribusinesses |
| ASPAUK | Agricultural Statistics and Policy Advisory Unit |
| BDS | Business Development Services |
| CARE | Cooperate for American Relief Everywhere |
| CECI | Centre Canadian d'Etude et de Cooperation Internationale |
| EAR | European Agency for Reconstruction |
| EU | European Union |
| FA | Farmer Association |
| FAO | Food and Agriculture Organization of the United Nations |
| FINCA | Foundation for International Community Assistance |
| FRY/FYR | Former Republic of Yugoslavia |
| FYROM | Former Yugoslav Republic of Macedonia |
| GDP | Gross Domestic Product |
| GMP | Good Management Practices |
| HA | Hectares |
| HACCP | Hazard Analysis of Critical Control Points |
| IFDC | International Fertilizer Development Centre |
| KBS | Kosovo Business Support |
| KIA | Kosovo Institute of Agriculture |
| KODA | Kosovo Organizations of Dealers Association |
| KTA | Kosovo Trust Agency |
| KVS | Kosovo Veterinary Services |
| LF | Lead Farmers |
| MAFRD | Ministry of Agriculture, Forestry and Rural Development |
| MEB | Micro-Enterprise Bank |
| MMP | Master Market Program |
| MT | metric tons |
| NBFI | Non-Bank Financial Institution |
| NGO | Non-Governmental Organization |
| NPK | Nitrogen Potassium Potash |
| PF | Participatory Farmers |
| PISG | Provisional Institutions of Self-Government |
| RTK | Radio and Television of Kosovo |
| SCF | Save the Children Fund |
| SOE | Socially Owned Enterprise |
| SOW | Scope of Work |
| SSOP | Standard Safety Operating Procedures |
| SWOT | Strengths, Weaknesses, Opportunities, Threats |
| UNMIK | United Nations Mission in Kosovo |
| USAID | United States Agency for International Development |
| VAT | Value-added tax |

WB
WTO

World Bank
World Trade Organization

TECHNOLOGY TRANSFER & INFORMATION NETWORKING ASSESSMENT IN KOSOVO

1. EXECUTIVE SUMMARY

1.1. Assessment of Technology Transfer

Since the end of the war in 1999, Kosovo has seen a rapid recovery in the agricultural sector. For example, the rate of replacement in livestock numbers has been impressive. Donor agencies and NGOs have been active in the transfer of technology to targeted groups of the population. In many cases, this assistance has been targeted to poverty alleviation. There has been a group of producers that have emerged and now constitute a commercial agribusiness industry. Two years ago there were 20 to 30 private commercial operators. Today there are between 200 to 300 commercial operators in agricultural sector (IFDC). This group will continue to expand and consolidate their activities in production, distribution, processing and marketing. This group holds the potential for transforming the agribusiness economy in Kosovo with the possibility for a broader impact on the regional economy.

It is fair to conclude that the rate of technology adoption has been impressive but still constrained since the war. The commercial producers face a general lack of capital in agriculture. The banking system does not identify agriculture as a priority sector for investment. Profitability levels have been low because of the small size of land holdings, and banks did not differentiate the subsistence operations from the more commercial type of operations. The legal system has not protected banks if loans were defaulted with debtors able to continue their appeals in the court system without final summary judgment. Production and market risks are inherent in agricultural, and there are no risk management tools for agribusiness firms.

It is accepted that fiscal policies have been burdensome on commercial agribusinesses. The customs (10%), VAT (15%), and transit taxes (5%) on imported equipment and machinery is 31.5 percent, and the VAT cannot be reclaimed. This policy has deterred companies from starting and expanding their businesses and ultimately hiring employees. This policy is inconsistent with stimulating economic development. In Serbia manufacturers are either given tax holidays or subsidies to purchase new equipment. VAT can be claimed back on processing inputs (e.g. packaging, fertilizers, seed), but this takes time in Kosovo and is a financial burden to start-up companies.

USAID's cooperators have been successful in transferring "hard" technologies to producers. Poultry producers are using improved hybrid layers for egg production. Vegetable hybrid seeds have been imported. Soil tests are being conducted to reduce the cost of production and increase crop yields. Farmers understand the need to rotate crops to reduce diseases. Irrigation decisions have been improved by a hand-held measuring equipment. Greenhouse technology is being adopted with appropriate irrigation systems.

What has been slower to take hold are what we call “soft” technologies. These are systems that require industry and government to agree on protocols for operation. Grades and standards are not generally defined for an industry. (The dairy processors have grades and standards, but most producers do not understand these requirements). In the horticulture industry there are no grades and standards for selling produce. Without these grades and standards, producers do not have an incentive to adopt new technology, handle products properly, and manage production efficiently. Certification of food products is not implemented because the market system does not have recognized standards. In the poultry industry, feed formula software has been introduced but the suitability of the technology in Kosovo is questionable.

1.2. Assessment of Information Systems

The institutions to modernize the agricultural sector have not advanced as rapidly as required. MAFRD and the Kosovo Institute of Agriculture at Peja are having limited impact on introducing new technological innovations. Applied research, testing and certification are supportive roles for the government. These areas remain weak and not helpful to the needs of the emerging commercial agribusiness sector. The “old” state mentality still prevails with a “top down” system of control. Institutions need to be unshackled from their bureaucracy and allowed to take a more proactive, business-oriented approach. A business-oriented model could be applied to the KIA and its testing facilities for industry certification. This could significantly improve the ability of agribusiness firms to compete in the market.

Delivery of technology innovations will continue to play an important role in the development of agriculture in Kosovo. The European Union agencies (EAR), donor agencies (Swiss, Norwegians), NGOs, and private firms will continue to be active in technology transfer to both subsistence and commercial farmers. It is unreasonable to expect that commercial processing companies can shoulder the expense and dedicate the time to extend improved technologies to commercial producers. The processing firms are struggling to establish and compete in a market where the trade policies place them at a disadvantage. Imported food products, many which are subsidized, flood the Kosovo market. Processing firms want regular supplies of quality raw materials at a fair and stable price to plan their production. In the case of the dairy industry, they will import powdered milk rather than bother with domestic milk of a generally inferior quality. Processors do not have the luxury of time and money to educate commercial farmers.

1.3. Recommendations

The recommendations set forth in this report focus on an approach to accelerate private sector growth (SO 1.3.). USAID is encouraged to focus on a few agricultural sectors and develop a long-term plan (five to ten years) for these sectors. Job creation and income generation are two important considerations for selecting sectors. The recommended sectors to further investigate are:

- livestock-dairy-meat
- horticulture

Within these sectors, a system’s approach is recommended that will integrate production, processing and marketing activities.

It is recommended that the competitiveness of the agriculture sector be improved. (IR1.3.1.). A set of programs can strengthen the commercial processing industry and forge stronger linkages to commercial producers. Processors need greater assistance in good manufacturing practices (GMP) including HACCP, SSOP, and possibly IS9000 certification. The SCF project has shown that the model of lead farmer (LF) and their participatory farmers (PF) is successful in testing and transferring technology. This approach should be continued and expanded, and this group of producers linked to commercial processors. The linkage can also be strengthened between Farmer Associations (FA) and commercial processors. The number of milk chilling centers and packing sheds can be expanded and linked to commercial processors. The implementation of innovative production-processor contracts is recommended that includes the commercial producer, processor and a financial institution conducting a joint marketing venture. A comprehensive program for the transfer of technology and information is proposed. A consortium of technical experts can be formed within AKA to deliver services on a fee basis. Business Development Service (BDS) firms would assist commercial processors in business skill development, business ventures, and market intelligence. A BDS firm would train small business entrepreneurs for a nation-wide dairy herd improvement program. These entrepreneurs would specialize in livestock services (dairy herd management, pregnancy testing, AI and milk testing). RIINVEST or a BDS firm should conduct market intelligence to support negotiations for production contracts between commercial producers, processors, and involving a financial institution. Projects in milk marketing could be patterned after a program in Albania. Market ventures could be done in sunflowers, maize and other products involving an agro-processing.

The capacity of the commercial processing firms needs to be improved (IR1.3.2.). Timely agricultural information and communication would facilitate market transactions and allow for better business decisions. A BDS firm should undertake this activity and disseminate information to key commercial producers and processors. Testing and certification of food products is needed to establish grades and standards and to monitor products in the market place. Laboratory analysis is necessary. The Kosovo Institute of Agriculture (KIA) at Peja could play a supportive role to commercial processors. KIA could be supported in its transition to a demand-driven self-sustaining institute. The laboratory at the Pristina University could also be considered for this business model approach.

Testing and certification would open the opportunity for developing a demand driven agribusiness program that is both outward and inward looking. Combining market research on products for export with the certification program would allow Kosovo to become more active in the regional markets. A series of steps are listed for undertaking this market orientation.

To promote entrepreneurship, an innovative education program in agribusiness (The Market Master Program at Texas A&M University) could be implemented in Kosovo. The program would be targeted to commercial processors and exporters. A business development service (BDS) firm would be trained to administer the program. Finally, a mentorship program between a commercial processor in Kosovo and a processor in the EU would be established. Candidates in the Mentor Program would be graduates of the Market Master Program. The entrepreneurial relationship with an EU manufacturer, wholesaler or retailer would build a significant relationship for networking, technology transfer, and business skill development.

The business operating environment in Kosovo needs to be improved (IR1.3.3.) The best strategy vehicle for achieving this is to strengthen the AKA to be an advocate for changes in fiscal and trade policies. The AKA can be effective in advocating for necessary changes because its members include commercial producers and processors. The AKA has the opportunity to become self-sustaining and the success of this activity would improve the operating environment in Kosovo.

USAID has a unique opportunity because of its regarded status to facilitate policy dialogue. This could be done through one of USAID's collaborating institutions (such as RIINVEST).

- Market contracts need to be recognized by the legal system. The use of market contracts would facilitate the linkage between producers and processors.
- There are financial restrictions placed on non-bank financial institutions (NBFI) which diminish their ability to service rural enterprises. These restrictions need to be examined and hopefully eliminated.
- Another area of importance would be to advise the MAFRD and its institutions in setting priorities, agendas and design of an applied agricultural research program. New and appropriate technologies for agriculture can only be sustained through institutions conducting necessary programs of the appropriate size and in the right locations. This recommendation does not mean that USAID has to fund this research program, but it can be a leader in guiding the necessary institutions that are responsible for applied research. This activity could also include the University of Pristina, and USAID could draw upon its access to U.S. land grant universities through its Title XII Cooperative Agreements for strengthening the research programs on new technologies for Kosovo. The improvement of the existing seed law could involve the research institutions.

A program is outlined that would focus on a developing a demand-driven agribusiness sector. The following components would be integrated into a comprehensive program.

- Market research on regional and Western European markets for Kosovo products. This will include competitiveness with imported food products.
- Product design, testing, certification and branding of products for domestic and export markets. Institutional development of support services would be needed: research labs, BDS firms, financial institutions, and trading companies.
- Identify lead processing firms and their marketing agents for exploiting key market niches in domestic and export markets.
- Support market efforts with training of entrepreneurs (Market Master Program and mentoring programs), small grants program and venture capital, and a linkage program with key customers in target markets.

2. USAID’S NEW STRATEGIC OBJECTIVE AND DEVELOPMENT OF THE AGRIBUSINESS SECTOR IN KOSOVO

2.1. USAID’s New Strategic Objective (2004 to 2008)

USAID strategic objective (SO) is to accelerate the growth of the private sector by supporting the development and expansion of competitive industries. These industries will compete for local and regional market share, and they will attract flows of investment capital. USAID plans to target specifically agribusinesses to improve standards and processes to meet domestic demand. Where it is feasible, the project will help increase exports into regional markets. This strategy does not address an important issue of stabilizing rural livelihoods. The results from review of USAID projects indicate that success is being achieved in transitioning some subsistence producers to being viable and sustainable commercial operations.

USAID has set as an intermediary result to increase the competitiveness of the agriculture sector (IR.1.3.1.). Innovative technologies are necessary to improve the production, the quality and to lower the costs of agricultural products. Adoption of these technologies will require access to financing to accelerate the introduction of capital-intensive technologies.

Local entrepreneurs need the necessary skills to adopt improved technologies to be competitive (IR.1.3.2.) Skill training in business management, financing, and marketing are crucial to agricultural products being competitive.

Business operating conditions are necessary for the take-off of improved technology and enhanced business skills (IR.1.3.3.). Businesses and associations require an environment of laws and codes of conduct that fosters a competitive environment. Businesses must demonstrate through business plans and financial statements that they are credit worthy for receiving the necessary capital to adopt technologies.

This assessment addresses the mechanisms that have served best in transferring technology and identifies information systems that are leading to a competitive agricultural sector.

2.2. Issues for this Assessment in Regard to USAID’s Approach

This assessment looks at the role of technology and information systems to develop a commercial agribusiness sector in Kosovo (see Scope of Work in Appendix.) It will be important to identify the strengths and weakness of the existing information system for the agricultural sector. Several questions are posed that will have a bearing on any approach.

- 1st. Is the skill level of the population important? Kosovo is a country that has a relatively educated population with a good work ethic. Many of the currently underemployed have worked in factories or government businesses before they were released during the 1990s.

- 2nd. Will SMEs emerge on their own self-initiative? SMEs are emerging with their own initiative as evidenced by the excess demand for credit. SMEs in the agriculture sector will create jobs and generate income opportunities.
- 3rd. What is the delivery system for new technologies and will it support USAID's new approach? Training is important in developing successful SMEs. Training needs to be demand driven by the client otherwise it will not be sustainable. Currently, the information system for new technologies is not developed except those funded by donor programs.
- 4th. Have the incentives to adopt new technologies been distorted by a dependency syndrome? Grants, free services and subsidies have delayed or caused the failure of start-up businesses. Donor programs have overlapped in some geographic areas and pulled participants away from existing programs by offering better benefits.
- 5th. Will commercial processors undertake extension activities to deliver the necessary technology to producers of their raw material? Processors will do this only if it makes financial sense. In general, commercial processors in Kosovo are unable to undertake producer education programs. Processors would rather set grades and standards, and then pay premiums and discounts for producers who met the necessary standards. The legal system does not allow for widespread use of forward contracts at this time. Short-term forward contracts for milk delivery are more likely to be used than longer term crop contracts such as potatoes for processing.

3. TECHNOLOGY IN THE AGRICULTURE SECTOR IN KOSOVO

“A dynamic contribution to economic development from the agricultural sector and significant improvement in rural welfare depend upon the modernization of agriculture through technological change.” John W. Mellor

3.1. Role of Technology in Agriculture

The introduction of technology is an important component for the transition of a traditional and stagnate agricultural sector in Kosovo to one that is commercial and modern in all aspects of production, processing and marketing of agricultural products. This assessment takes a broad view looking at the state of technology innovations that are occurring in Kosovo. The modernization of the agricultural sector is important because 60% of the population resides in the rural sector and is locked into poverty and about 10 percent of the rural population is in severe poverty. The rural economy is stagnant and labor productivity is low, especially compared to countries in the EU. The adoption of improved technologies in agriculture is one of several necessary conditions for economic development of Kosovo.

3.2. Situation on Level of Technology

Productivity levels of various agricultural commodities are presented in Table 3.1.. The table indicates low to medium levels of technology being employed. The gap between actual and potential yields indicates that a high payoff can be realized from investments in technologies to improve productivity and profitability. In the past four years technology transfer has improved productivity in agriculture. Honey production has increased from 7kg/hive to 15kg/hive because of better disease control. Broiler yield has increase from 1.75kg for 48 days on feed to over 2kg in 42 days because of improved genetics (IFDC).

3.3. Factors Influencing Technology Adoption

3.3.1. Transaction Costs

Kosovo is a country that has difficult, expensive internal and international transport routes which are impediments to trade, especially for exports. These factor costs make Kosovo less competitive for international trade but offer a natural protection for the domestic market (Lingard). The importation of highly perishable fresh products will be at a disadvantage because of the delays at customs and the lack of refrigerated storage. The cost of gathering information is high for participants in the marketing system for agricultural products. Input dealers find it is expensive to effectively reach producers with timely information on their products. The transaction costs are high to source sufficient quantities of products from many small, dispersed farms. Handling, packing and storage infrastructures are inadequate so products do not arrive in the market in a timely fashion resulting in high product losses. It is reported that the post-harvest loss for apples in storage can be over 20 percent (personal communication with farmers in Peja).

Table 3.1. Productivity Index for Selected Agricultural Products

| Commodity | Units | Yield | Potential Yield | Technology Index (High, Med. Low)(2) |
|----------------|--------------|-----------|-----------------|---|
| Wheat (2) | mt/ha | 2.4 – 3.5 | 4.0 | |
| Wheat – EU (3) | mt/ha | 3.0 | | |
| Wheat (4) | mt/ha | 3.0 | 4.2 | Medium |
| Barley (4) | mt/ha | 2.0 | 3.0 | Medium |
| Corn (3) | mt/ha | 4.0 | 5.5 | |
| Corn (4) | mt/ha | 2.8 | 13 - 15 | Low |
| Sunflower (3) | mt/ha | | 3.54 – 4.15 | |
| Sunflower (4) | mt/ha | 1.8 | 3.2 | Medium |
| Soybean (3) | mt/ha | | 3.13 – 3.48 | |
| Soybean (4) | mt/ha | 1.5 | 2.8 | Medium |
| Milk (3) | lt/lactation | 1,300 | 6,000 | |
| Milk (4) | lt/year | 2500 | 4000 | Low |
| Milk (5) | lt/day | 5.0 | 24.0 | |
| Egg (4) | Percentage | 75 | 89 | Medium |
| Poultry (4) | kg/no.ofday. | 1.75/48 | 2.0+/42 | |
| Cucumbers (6) | mt/ha | 44 | 79.9 | |
| Tomatoes (6) | mt/ha | 60 | 92.7 | |
| Potatoes(6) | mt/ha | 33.7 | 43.6 | |
| Onions(6) | mt/ha | 20 | 22.4 | |
| Beans (6) | mt/ha | 0.8 | 2.0 | |
| Peppers (6) | mt/ha | 27.1 | 30.2 | |
| Cabbage (6) | mt/ha | 70 | 85 | |
| Potatoes (7) | mt/ha | 30 | 50 | |
| Potatoes (8) | mt/ha | 5 – 15 | 50 | low |
| Alfalfa (8) | mt/ha | 2 – 3 | 12 – 13 | medium |

Notes:

(1) Rating by IFDC staff. (2) Source is Xenia which is using imported improved seed from Croatia (Ana) and technical package of fertilizer and soil testing. (3). Lingard. (4) IFDC. (5) H & H Dairy farm in Shtime. (6) CECI briefing materials. (7) Pestova Import – Export (8) Seed Project, Food and Agriculture Organization

3.3.2. Market Constraints in the Commodity Marketing System

Marketing issues in Kosovo agriculture are influenced by both trade policy with its neighbors in the region and by internal marketing constraints. The EU recognizes Kosovo, as a part of the FRY, and any trade to the EU will count against the FRY's negotiated totals. It is unlikely that Kosovo will be competitive on either price or quality standards to become a significant agricultural exporter to the EU. Kosovo is an open market for food imports, and it is rumored that some of these imports do not comply with product standards in their home market.

The trade deficit is high in Kosovo and looms as a major problem affecting the domestic economy and the agribusiness sector. In September, 2003 alone the deficit was €5 million. The deficit is being covered by remittances of Diaspora and international donations. The ongoing decline in revenues from donations will further worsen the macroeconomic stability. Adequate economic policies, focused on the development of manufacturing businesses, export promotion and increasing competitiveness have to be pursued. (RIINVEST , p. 13).

3.3.2.1. Cereals and Grains

Kosovo is very dependent on the imports of wheat and flour. Wheat requirements are approximately 400,000 mt per year. On average only 54% of the demand has been met by domestic production over the past 10 years. Imports of wheat were 173,000 mt in 2001 (SHPUK). Wheat farmers using traditional methods do so to first provide for their home consumption needs and then will market the surplus. Producers do not haul wheat long distances or in large truckload lots so that marketing costs are high. There are 82 flour millers of which 77 are privately owned. The mills are old and not designed for efficiency. There is approximately 800,000 mt of storage capacity which is twice the amount needed. With the reported levels of subsidies paid for wheat and other grains in Serbia, it is difficult for Kosovo to be competitive in wheat and flour production. There are 20 – 25 feed mills and IFDC is working with six of these mills. The demand for maize for animal feed is growing in Kosovo. A constraint is that there are only two corn harvesters at the present time in Kosovo (IFDC).

3.3.2.2. Oilseeds

Sunflower has been the principal oilseed crop with a major processing plant, Alcon, at Ferizaj. The best lands in the Balkans Region for sunflower are reported to be in Kosovo (IFDC). Farmers sell to the plant at the prevailing cash price. The plant has a capacity requiring 10,000 HA of sunflowers. Because of the limited market options for farmers, sunflower production has fallen in Kosovo. Kosovo imports approximately 3,700 mt but the amount has been much less in the years of 2000 and 2001 according SHPUK.

3.3.2.3. Dairy Products

The major constraint facing the marketing of fluid milk is the present low level of quality. There is no Grade A milk produced though this is changing slowly CARE reports that a significant percentage of milk tested at chilling centers is of low quality with the presence of mastitis. Milk produced is consumed both in the home as well as converted into traditional cheese products.

Producers can face a problem of selling in an oligopsonistic (small number of buyers) market that could result in a price disadvantage to producers. At this time the raw milk price is reasonable at €25 - .30/lt. There are 20 milk processors but only eight firms are viewed as viable businesses. Compounding the problem is the small size of dairy herds and their dispersed location resulting in a high cost of milk collection. The establishment of milk collection centers is improving the marketing situation. Price is set on a fat unit basis which does not reward producers for meeting quality and standards. Large amounts of milk powder and retail dairy products are imported, some of which comes from markets that receive subsidies. Milk producers in Serbia receive a subsidy of €04/lt (pers. comm.. with Black, ABU Bank).

3.3.2.4. Eggs and Poultry

The egg industry is composed of around 150 companies but the number is decreasing each year. Firms are getting bigger and there are probably 30 large firms supplying 80% of the local market (SHPUK). These large producers are members of the AKA. The poultry industry started from nothing several years ago with the purchase of used equipment. The marketing chain for fresh eggs is relatively short, and eggs are readily available in the market. Fresh eggs are imported, but without an adequate testing protocol at the border it is difficult to know whether the eggs exceed their allowable shelf life and are being dumped in the local market. The broiler industry is still small with two companies producing 10,000 chickens per quarter.

3.3.2.5. Beef and Other Red Meat Products

The beef industry is primarily a by-product of the dairy industry. Small farm operators prefer the Simmental breed because it is a moderate milk producer as well as a good beef animal. Producers sell to traders at rural livestock markets that rotate on a weekly basis. The Pristina market is the largest cattle market. Traders visit these markets to purchase cattle. It is reported that large numbers of uninspected slaughter cattle enter from Serbia and this affects the local price for livestock. There are 10 meat plants as well as many small meat shops. The largest plant is LGB in Gijlan which can also slaughter sheep and poultry. Pig production is in the Kosovo Serb and Catholic areas, and Serbia is a source of pigs and pork meat which may enter through illegal channels.

3.3.2.6. Fruit and Vegetables

Producers prefer to sell their produce at harvest on the fresh market. Producers will move fresh product from one local market to another for two to three days and when they cannot sell they will take their products to the processor (ABI-ELIF and their Progresso brand). The processing market is not well developed. In the case of apple producers, when they cannot sell they will put apples in storage on their farms, usually a converted garage. Storage facilities are poorly designed and as much as 20 percent of the crop can be ruined during storage. Grades and standards do not exist in the wholesale and retail trade. Retailers stated that packaging and quality are not up to their standards. Retailers also want a regular supply and consistent product, preferably throughout the year. The market price will not vary much from the harvest price because of competition from imported apples and other fruit during the winter. Fruit associations are being developed and the opportunity for organized marketing exists.

3.3.3. Risks in Technology Adoption

Low-income households living near subsistence attach a high risk premium to innovations, and they are unlikely to try such innovations (Mellor). Many small farmers are unable or unwilling to change their production practices. Farmers will place a high discount factor on investments in agricultural technology because of the length of time for the benefit stream of the investment as well as the perceived high risk due to factors beyond their control, e.g. weather changes. Interventions require that risks be reduced through facilitative mechanisms that encourage participation without exposing the farmer to detrimental financial and human health risks. Certain technologies can have an adverse affect on the environment, and these impacts have to be considered. Advancing a technology like computer feed rations to producers who lack the fundamental understanding of nutrition and biochemistry could have adverse consequences on producers.

3.3.4. Low Profitability of Small Farms

There are many small farmers that are unable or unwilling to change their production practices. It is difficult for these small farms to be profitability. A farmer will plant wheat on a high percentage of their land mainly to feed their family, and the returns from wheat are very low. The opportunity to generate income is low and farmers stay trapped in a subsistence livelihood. There is no incentive to break the cycle and take on new technologies.

3.3.5. Limited Capacity

In regard to a threshold of necessary capacity to adopt new technologies, the example was provided in Gjakova that French Solidarity, a charitable organization, provided greenhouses to poor households in the area. Without the necessary training and lack of available resources, these subsistence households were not able to utilize the technology, and the greenhouses fell into disrepair. It will be important to assess target households by their ability and resources to undertake new technologies.

3.3.6. Land Tenure System

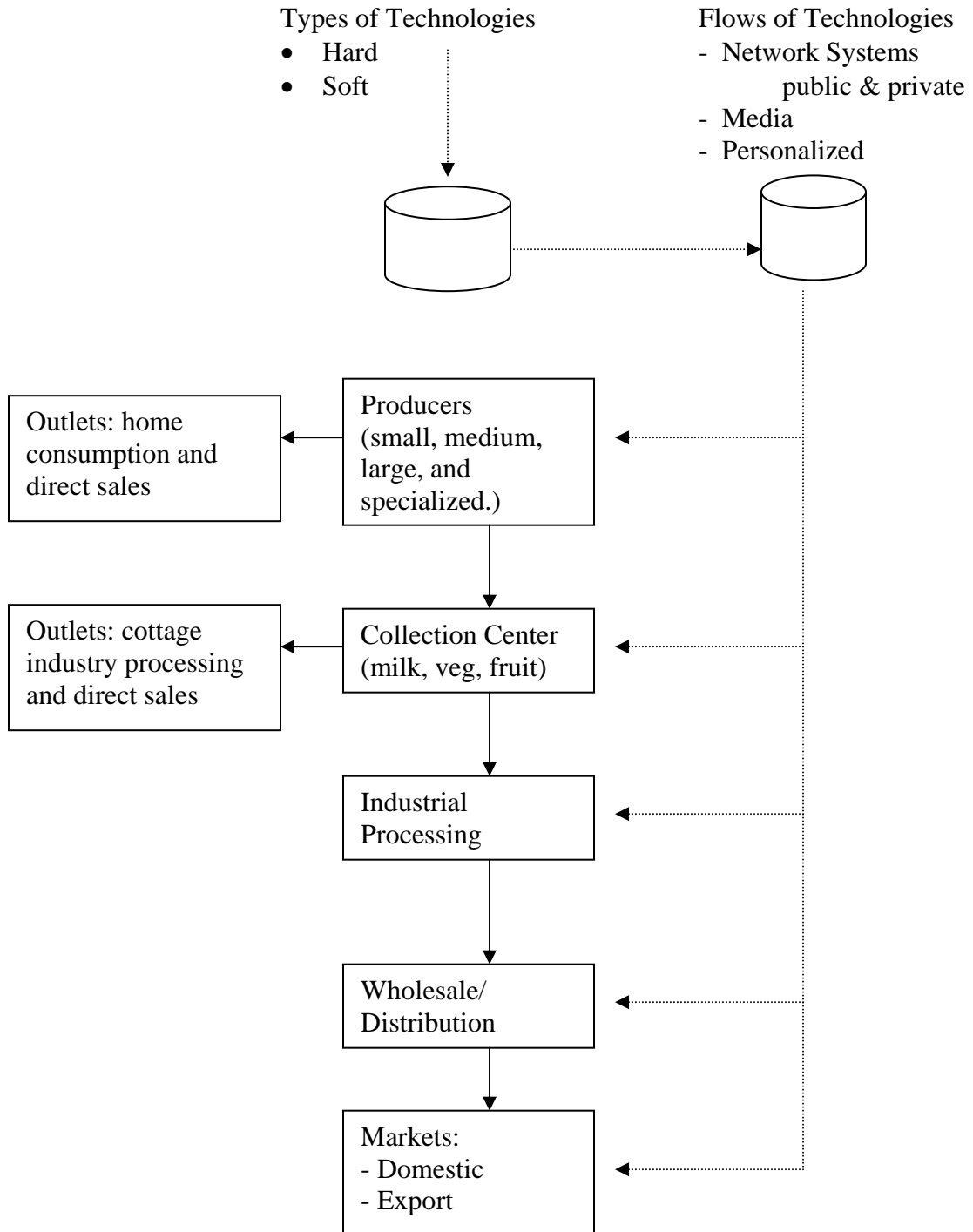
The land tenure system is a severe barrier to technical innovations in agriculture. Landholdings are fragmented and not contiguous. The value of land is based not on agricultural production but rather on its value for development for houses and commercial uses. Land rental is for short periods so that the renter has no incentive to make improvements to the land or its fertility. It has been reported that the nutrient level in the farmland is far below acceptable productive levels. Irrigated land in certain parts of the country can be as high as €1,500 to €2,000 per HA. Dryland agriculture can be as low as €200 per HA. For all these reasons, there is not much substitution effect by farmers shifting resources between enterprises in response to price changes for agricultural products.

3.4. Model for Understanding Technology in Agriculture

Diffusion of innovative technology is necessary for development of a modern food system in Kosovo but not sufficient by itself. Other requirements are necessary such as the development of the human capacity to understand and differentiate technologies for specific requirements. Improvement in the policy environment would go a long way to promoting the transition to a modern and commercial food system in Kosovo.

In Chart 3.1, our basic paradigm for technology innovation is presented. Technologies are differentiated by whether they are hard or soft in nature. Hard technologies are those that are science-based and require some forms of tangible instruments to be implemented. Soft technologies are generally based on human logic and rules that may require hard technologies to be validated but are created to improve the operation of a system: HACCP, certification protocols, trade policies, etc. These soft technologies are not immutable but can be adjusted to different changes in the environment. The illustration indicates both a physical flow channel for hard and soft technologies as well as the flow of resources that create products that move to the final consumer. By breaking down the structure of the marketing system we hope to differentiate that what is needed at one level does not necessarily apply to another level in the system. Furthermore, we recognize that within a level of the market system different segments of population can be targeted, e.g. subsistence farms versus commercial farms. Profitability is one driver for technological adoption. Commercial entities that have the size and capacity to be profitable will be more likely to adopt technologies and even take risks to adopt the technologies while subsistence farm operations will not. One extension technique (delivery system) does not apply to all participants. For example, larger commercial farmers will have access to technology and improved ideas from input dealers who sell direct to commercial farmers in bulk while small subsistence farmers will not likely be serviced by input detailers.

Chart 3.1. Illustration of Paradigm for Technology Diffusion in Kosovo



4. CATEGORIZATION AND ASSESSMENT OF TECHNOLOGIES

Technologies are divided into two categories: hard and soft technologies. Hard (science based) technologies improve the technical coefficients of production and processing. Soft technologies are improvements that result from changes because of market or other environmental requirements.

4.1. Hard Technologies

Hard technologies impact on technical relationships (input/output). These technologies can have faster pay-offs to the producer or processor by reducing the cost per unit, by reducing the amount of inputs for the same level of output, or by increasing output for the same level of inputs. Return on these types of investment can be high and can occur in a short period of time.

4.1.1. Seed Varieties

Improved hybrid seed is a product innovation that has a very tangible benefit. Improved seeds of vegetables, potatoes, cereal and grains are increasing the yields in Kosovo agriculture. Sources of these seeds are from Austria, Slovenia, Holland and other European countries. The pay-off is in high net returns per hectare.

The MAFRD maintains a national seed list, and imported seed has to be tested for two years before seed can be placed on the national seed list. Producers generally regard this as an unnecessary bureaucratic process that slows the introduction of improved seeds into Kosovo. Seed varieties approved in the EU should not have to be retested for two years.

4.1.2. Cultivation Practices

Respondents mentioned that the traditional practice was to plow the land only once before planting. With new techniques, farmers have realized that plowing the field twice results in better yields. Farmers mentioned that they have learned to irrigate more often than previously and have improved their yields. In the Prizren area, farmers reported learning from the extension agent of the farmer association that it is necessary to rotate crops on vegetable lands to improve fertility and reduce the prevalence of diseases. Potato farmers have recognized that crop rotation is essential for reducing diseases in potatoes.

4.1.3. Fertilization

Soil testing is becoming more common though it is expensive for farmers. Soil testing provides a savings to farmers by reducing the amount of unnecessary fertilizer. In interviews with farmers, they mentioned the advantages of soil testing and said they learned about this in seminars conducted by the extension agents of their farmer association. There are two labs for testing soil samples.

DAP fertilizer, which is more specific in its composition, also results in savings to fertilizer dealers who reduce the number of trucks necessary to import fertilizer (from two to one truck) to

obtain the same amount of nutrients. IFDC has actively promoted the advantages of alternative fertilizers to the common NPK (15-15-15). In visits to several farm supply shops, adequate quantities of Urea, NPK, KAN, and nitrogen were seen. DAP fertilizer was not available in these shops.

4.1.4. Animal Genetics

The livestock numbers are estimated to have returned to pre-war levels. NGOs, World Bank and international agencies have supplied breeding stock to producers. Some dairy producers have become commercial entities after receiving improvement dairy animals. The Simmental breeds preferred by smallholders because of their ability as a dual purpose animal. Commercial dairies have a preference for Holstein/Friesian as well as other high milk yielding dairy breeds. Improved genetics in broilers and layers is resulting in greater production of meat and eggs. The improved genetics are sourced by poultry producers linking to international poultry companies for day old chicks. The industry is considering the establishment of parent stock.

4.1.5. Production and Processing Equipment and Facilities

4.1.5.1. Farm Equipment

Farm equipment has improved since the end of the war. Farmers have not had the resources to purchase new equipment, but have chosen to repair their existing equipment when possible. FAO with other donor countries repaired 50% of the damaged tractors after the war. FAO and the World Bank distributed 300 tractors with a set of implements valued at DM9 million.

4.1.5.2. Horticulture

CECI and other NGOs have promoted new technology in horticulture production. Greenhouses and tunnel systems are extending the season for vegetables and will increase a farmer's revenues by as much as 50 to 100%. The Germans donated a cold storage facility for vegetables to a farm association near Gjakova. The cold storage unit has not been activated. Local storage facilities for fruit are below acceptable standards, and product losses can be as high as 20 to 30 percent.

Pestova Export – Import near Prishtine has invested in new farm machinery for potato production. The company installed a bagging line for potatoes as well as a new line for chips and French fries.

IRC found that the use of “tension meters” by fruit growers is the most recognizable, practical, and the most important technology/innovation for orchard management (IRC).

4.1.5.3. Livestock and Dairy

CARE has successfully introduced silage equipment in their project sites to support dairy development. Milk collection centers are established and chilling vats supplied by donor agencies and some supplied by dairy processors. Dairy processors have received loans from different sources and have upgraded their processing lines. Bylmeti Dairy near the Prishtine

airport added a large complement of storage tanks and other equipment to manufacture yogurt. Devolli milk plant near Peja invested in a Tetra-Pak ultra-high temperature (UHT) packaging line. The company plans to install a second line for milk and juice this year. This investment is a boost to the local dairy industry because of the large volumes required of high quality milk. Other plants have invested in equipment with equity funds by the owners after having worked in Europe (example is plant near Gjilan).

4.1.6. Irrigation Systems

The EAR in conjunction with SOFRECO and Societe du Canal de Provence rehabilitated 15,000 HA of irrigated farmland to increase the total irrigated area to 35,000 HA. The same donors are focusing on institutional strengthening measures, both at the Irrigation Providers (IPs) and Water Users Association (WUAs) levels. These efforts will have direct impact on the further transfer of technology for commercial agricultural production.

4.2. Soft Technologies

Soft technologies are improvements brought about by the changing demand in food quality and other characteristics: food safety (HACCP, SSOP, ISO9000), product certification (EURAGAP, IFOAM), product traceability (beef and milk), market information: (pricing efficiency), forward contracting agreements, and business skills. The return on investment for these technologies may be harder to measure and take a longer time to materialize than for the hard technologies.

4.2.1. Food Safety

Food safety is an important issue in the EU. Food processors have to meet certain product and quality safety requirements. Hazard Analysis and Critical Control Points (HACCP) is required for processing plants. Processing plants need to have a Standard Safety Operations Plan (SSOP) on how they implement their quality assurance program. Currently these regulations are not applied in the food processing industry.

4.2.2. Product Certification

Kosovo lacks the protocols to market into the EU. Product certification for EURAGAP for fruits and vegetables are not in place. There are currently no “food certification” requirements for food products coming into Kosovo.(KBS) The domestic market does not require these certifications so producers are not being pushed to adhere to international standards. Some initiatives are being taken in MAFRD with testing of milk and meat products. Land O’Lakes will begin a training program for staff at KIA in Peja in March, 2004. Certification will help to pressure the food industry to modernize in line with other countries in the Balkans.

4.2.3. Forward Contracts

The use of forward contracts between buyers and sellers is not well developed. A major difficulty is the lack of an effective legal system. Some examples were given of forward contracts (in writing) between Devolli Dairy Plant and a commercial milk producer. The

contract stated a price to be paid for milk meeting a certain quality standard. The price is negotiated for a period of time. The forward contract with H & H Dairy is an opportunity for the dairy to be a collection center for 24 other smaller producers. The price is EU.31/lt. ABI Dairy Plant in Prizren is using forward contracts with about 50 producers. The director mentioned that he is satisfied with the arrangement. The price is EU0.665 to 0.675/fat unit. Pestova is interested in using forward contracts for potatoes for the new processing facility; however, the owner is not willing to set a contract price at this time. ABI-ELIF, the Progresso brand, processes fruits and vegetables, but the company does not use formal contracts because there are no existing laws to enforce the contracts.

4.2.4. Business Skills

In discussions with one of the largest non-bank financial institution (NBFI), the director commented that businesses lack the skills and technology to be competitive in the regional market. Training and assistance to create an entrepreneurial class is lacking at the present time.

4.2.5. Good Agricultural and Management Practices (GAP and GMP)

There is a general lack of knowledge in use of pesticides and their impact on human and environmental health. Farmers have indicated an interest in knowing more about the use of pesticides and integrated pest management (IPM). Skills in dairy herd management are below average as indicated by the low level in the quality of milk. Good Management Practices (GMP) for processors is followed in only a few plants and is needed if the commercial processing industry is to be competitive in the domestic and regional markets.

4.2.6. Loan Instruments

Commercial banks are beginning to recognize that their standard loan packages offered in the commercial sector are not appropriate for agricultural lending. NBFIs are providing more flexibility in repayment terms adjusted to the seasonality of production. These loans are still short term. In general financial institutions are becoming more creative in reaching the rural sector.

4.3. Flow Mechanisms for Technology

Information flows through two major channels: public and private. Both of these channels are weak at the present time. Farmers have to spend time to gather information on their own from their neighbors and at local markets.

4.3.1. Information Networking

The information networking in agribusiness is still very rudimentary. The advantage is that Kosovo behaves like a small country market, and family networks allow for the informal flows of information. These personal relationships do not lead to a transparent market exchange so prices can be negotiated without relevance to actual market demand and supply conditions.

Producers have to make extra, individual efforts to get accurate reference points on prices and quantities.

Many Kosovars have relatives in European countries so that they are familiar with conditions there. Large sums of remittances are received from overseas. A recent estimate is €26 million in 2002 (CHF International). Access to the EU markets will be on an informal basis. However, getting a visa to travel is difficult for a producer without connections. Technology transfers have occurred when the linkage is made with a supplier in Europe. NGOs have supported trips (both individual and group) to establish these networks. These trips resulted in the purchase of technology (Pestova for potato seed and E & S for manufacturing concrete building materials)..

Several directors of commercial processing companies mentioned that they travel using their own funds to visit suppliers of technology. The owner of Alcon sunflower processor made seven trips to inspect different extraction technology for the plant. Others mentioned regular trips to Germany for purchasing new and used equipment.

4.3.2. Price Reporting

Interview with farmers found that there is an ad hoc process of price discovery. Farmers talk with other farmers, visit the markets, and rely on their buyers and wholesalers to tell them the prices. Price reporting is an important aspect of influencing agribusiness decisions. Producers' understanding of price relationships and price fluctuations (monthly, seasonal, annual, cyclical) are important to effective marketing. Swiss Intercooperation, a NGO, has been collecting horticulture prices for several years in Kosovo and distributing these prices to different groups. Most recently they started to email the prices to over 50 people and organizations, some farmers have email access.

4.3.3. Trainings and Seminars

NGOs and MAFRD use several formats for communicating information on technologies. Top down delivery systems have been the practice of the MAFRD and municipalities. The old style is to gather farmers into a meeting hall and deliver information. Farmers have problems attending these sessions because of lack of transport, and government officers have the same difficulty to visit farmers.

The most effective delivery for producers is for trainings to be demand-driven. This way farmers are getting what they feel is appropriate for their operations. In interviews, farmers stated that demonstrations of technology near their fields were the best. The technology is readily seen, and they can speak with the lead farmer who planted the demonstration.

Field days for farmers is of interest as well as open days where other interested parties, e.g. supply dealers, bankers, input suppliers, processors, MAFRD representatives, are invited to the demonstration sites.

IRC reported that during the 2003 orchard season 123 persons (growers and staff members of institutional partners) attended at least one of their trainings. An IRC survey of training

participates found that “hands-on” practicum by farmers result in high recognition of technology and rates of adoption rather than theoretical discussions and observations. This finding is important when designing programs to enhance the market linkage between commercial processors and producers. Farmer Field Schools used in other countries may have merit if they are producing for a commercial processor.

4.3.4. International Technical Assistance

International experts transfer the latest technical information to producers and processors in Kosovo (Table 4.1). These experts spend several weeks in Kosovo. These visits result in continued communications between the international experts and individuals or organizations in Kosovo. A wide spectrum of international assistance was provided at all levels of the agricultural sector. The benefit – cost return for this expensive technical assistance modality has to be weighed against the effectiveness and the lower operating cost of on-farm demonstrations using local technical experts offering more intensive “hands-on” involvement with producers. The later is likely to be more cost effective.

Table 4.1. SFS International Technical Assistance, 2003 - 2004

| Agency | Number Experts | Agriculture | Agro-Processors | Marketing, Finance & Others |
|--------------|----------------|-------------|-----------------|-----------------------------|
| CARE | 2 | 1 | | 1 |
| IRC | 7 | 3 | 1 | 3 |
| LoL | 5 | 4 | 1 | |
| IFDC | 1 | 1 | | |
| CECI | 5 | 3 | | 2 |
| KBS | 23 | 7 | 8 | 8 |
| TOTAL | 43 | 19 | 10 | 14 |

Source: SCF and KBS, 2004.

4.3.5. Demonstration Sites

Demonstration plots have been undertaken by several NGOs.

- CECI is promoting the use of demonstration plots within farmers’ existing fields. These plots are 200 m by 200 m and contain 7 types of vegetables crops. CECI provides guidance on varietal selection, production techniques (staking, plastic mulch and tunnels, fertilizer application, spacing and other techniques.) Good results were achieved in 2003 with higher yields and higher estimated net revenues per ha. Farmers reported a keen interest among their neighbors to observe the growing of these vegetables.
- IFDC and the MAFRD have conducted demonstration plots on cereal groups.
- CARE has 140 lead farmers for dairy production.

- IRC has demonstration sites for fruit orchards in three locations.

These demonstration activities are effective in involving lead and participating farmers, creating awareness, and generating high visibility for the project.

4.3.6. Extension Agents

In the public sector, extension agents employed by municipalities are perceived as not very effective. They lack the training and resources to reach farmers in a timely manner with useful information for their operations. In personal interviews, farmers did not mention municipal agents as a reliable source of information.

Several farmer associations employ extension agents. These agents are partly paid by membership fees in the association. The farm association at the present time relies on grant funds for their operation. Farmers interviewed said they were benefiting from the services of the extension agent for the association. The preferred number of farmers to one extension agent was said to be 50 to 1.

4.3.7. Media Channels

Producers reported listening to agricultural shows on radio and television. The format reports on current activities taking place in the agriculture sector. These media channels offer a timely release of current events, but it is not interactive. There are regional radio stations that could be used for broadcasting agricultural information. FAO and World Bank funded a quarterly magazine entitled Agro Revista that was widely received by the farming community. It was full of practical guides to agricultural practices and problems. The magazine has been discontinued. CARE published a monthly bulletin on prices of inputs and outputs and circulated to demonstration farmers. The bulletin was not continued after the end of the project. CECI-KDC publishes a newsletter for the members of the Anadrini Farmers Association. IFDC publishes a newsletter entitled, AGROSFERA, which is circulated to producers, agricultural input suppliers and other supportive agencies. IFDC also published a handbook on input supplies and dealers with KODAA, an association of dealers of agricultural inputs.

5. POTENTIAL PRODUCTS AND THE REQUIRED TECHNOLOGIES AND INFORMATION SYSTEMS

The SOW calls for identifying specific commodities and agricultural products that hold the most prospects for stimulating employment and income in the agricultural sector. Two sectors are proposed from which important commodities and food products can be selected. The products have different geographic areas. We would recommend that further work be done on preparing a strategic plan for these sectors to best indicate the best products for employment opportunities and income generation.

5.1. Identify Potential Commodities and Agricultural Products

Within agriculture, Kosovo's comparative advantage is more likely to be in the more labor-intensive production activities, such as vegetables and fruits, and in some livestock production activities, particularly ruminant-based, meat and milk production (Lingard). Kosovo was a net exporter of fruit and vegetables before 1989 to other republics of the Socialist Federal Republic of Yugoslavia. Kosovo has significant pasture and forage resources with little alternative use, a moderate continental climate and an abundance of low-cost, available labor (Lingard).

5.1.1. Livestock – Dairy - Meat Sector

5.1.1.1. Dairy Industry

The important dairy products are yogurt, whole milk and cheese in Kosovo. The per capita consumption is 150 lt milk equivalent (ME). If annual consumption is estimated at 300 million lt, Kosovo imports approximately 100 million lt or about one-third of its needs. Dairy production, collection and processing and distribution are labor-intensive and could provide rural employment. This sector is largely privatized, and production is still significantly below pre-war levels. The economics of dairy production are favorable and it is possible to make up to €200/year gross margin for a good cow that may cost around €800 to purchase (CARE).

5.1.1.2. Meat Products Industry

Red meat, especially beef, is a popular product. Pork meat has a small market restricted to Kosovo Serbs and Catholics. Beef can be seen as a by-product of the dairy industry and offers opportunity for import substitution. However, it will be necessary to implement forage systems of production that are more efficient than currently present. Furthermore, imported livestock from Serbia and frozen boneless meat puts pressure on cattle prices. Fattening beef animals can be profitable and should be closely examined for investment.

5.1.1.3. Poultry and Egg Industries

There is good indication that Kosovo could be self-sufficient in egg production (Lingard). High transport costs and the need for freshness could give an advantage to local producers. It will be important to continue to lower the price of feed grains which are a major component in the ration. This product category has potential. The employment in the poultry industry went from

90 to 1,200 people in a period of several years. Inexpensive imports of chicken meat and relatively high feed costs will constrain the opportunities in the broiler industry.

5.1.1.4. Feed Grains and Oilseed Industries

The livestock sector requires adequate supplies of feed grains for efficient production. Wheat, maize, sunflower and soybeans tend to be uneconomic even though the country imports a significant amount of its needs. Countries in the region subsidize their agricultural products. Sunflower may be feasible to support the oil factory in Ferizaj.

5.1.2. Horticultural Sector

5.1.2.1. Fruits and Vegetables Industry

Kosovo has a tradition of producing fruits and vegetables and did export products to other republics in the region. (Acreage and quantity – irrigated). The production is labor-intensive which suits local conditions at the present time. There are areas with a Mediterranean climate that will allow the production of vegetables. Kosovo will have to revive parts of its industry and investment will have to be made on a targeted basis. Significant support is required for greenhouses and processing facilities. The domestic demand for a wide variety of fruits and vegetables is strong. Fruit juices are being produced in Kosovo and are price competitive with imports. Devolli Plant in Peja is likely to install a tetra-pak juice line this year which will help the development of the fruit industry.

5.1.2.2. Potatoes

The domestic demand for potatoes is good, and the industry employs labor for irrigation and bagging/netting. Kosovo is nearing self-sufficiency in potato production and has had some success in exporting into the regional market. FAO attempted a start-up activity in seed potato production in the Dragash Municipality. The project failed because of the lack of careful project design, adequate preparation of the project, and supervision of the participants. Funds were misappropriated. Potato production in general can be profitable depending under which system they are produced. Effort and time are needed to prepare producers for their responsibility for a seed potato project. NGOs have a better track record in doing this.

5.1.2.3. Specialty Products

KBS has had some success promoting specialty products. These include herbs, teas, berries, and mushroom. There is a potential to rebuild the grape/wine industry; however this would require large long-term capital investments and significant technical expertise. The world market price for wines is currently depressed.

5.2. The Producer Level

5.2.1. Livestock – Dairy – Meat Sub-Sector

Milk production is important to the rural economy of Kosovo. A major constraint to dairy production and the viability of commercial dairy processors is the low test results on milk quality. CARE analysis of milk found that 30% of milk is of bad quality, defined as 4 to 20 million microorganisms and somatic cells per milliliter (ml) of milk; 37% is medium quality (500,000 to 4 million), and 33% is good quality (less than 500,000). (Grade A quality in the USA is less than 100,000). (SCF)

Dairy farmers are concerned about having adequate supplies of feed for their animals. CARE and other NGOs have been successful in demonstrating the use of corn silage. Production of forage crops can be very important for both dairy and beef producers.

Beef cattle producers struggle with the low price currently for slaughter animals. A combination of grazing and feeding systems are needed for different geographic areas. Farmers mention that they have access to large areas of pastureland but do not know how to best utilize this resource. Livestock producer associations have not taken hold, and more effort is needed on how they can be linked to commercial processors and butchers.

5.2.2. Horticulture Complex

In a survey conducted of horticulture activities in two zones and producers stated they aspire to more training to have better agricultural knowledge (S. Kaciu, 2002). In personal interviews, fruit growers in the Peja municipality were asked what types of information they needed for their operations. Farmers stated that they wanted to know about the proper use of pesticides, how to do integrated pest management (IPM), have access to good quality chemicals and to receive assistance in marketing.

Farmer associations are weak, and it is necessary to revisit this business model and determine how they can be effective and sustainable. These associations may need more assistance in developing commercial activities and linking to commercial processors.

Case Study of H & H Dairy Farm

Xhyle Idrizaj is a dairy farmer who is making significant contributions to the dairy industry. She started her herd in 2000 with the help of a Swiss donor agency. She now has 130 dairy cows. She serves as a nucleus for 24 families that bring milk to her collection center for supplying Devolli Dairy Processing company. She monitors milk quality and conducts practical trainings for the group. She has attended over 100 trainings and some at Lipjan Technical High School (see write up in Chapter 5). Xhyle employs six people on her farm as well as supports 372 people in her milk collection scheme.

Strawberry Production

Swiss Intercooperaton initiated a new business venture of strawberry production. In a period of three years they increased production to 30 mt in 2003 and 25 producers are planning to produce and market 60 mt of fresh strawberries in 2004. The technological package delivered included mobilization of farmers, training, and SI also provided 50 percent of the first year cost for development of the cartons and the plastic trays. Farmers will plant 8 HA of strawberries in 2004.

5.3. The Processor Level

5.3.1. Livestock-Dairy-Meat Sector

There are about six dairy processors that have established viable business operations. In interviews with some plant managers, they discussed difficulties with receiving quality raw milk. They also indicated that they do not have the time and resources to train dairy farmers in improving the quality of their milk.

There are a large number of flour millers but their technology and plant facilities are old. These plants import large quantities of wheat and flour for their operations. GMP and improved efficiencies in operating their plants are important interventions.

5.3.2. Horticulture Sector

The commercial fruit and vegetable processing industry is really non-existent. ABI-ELIF in Prizren is the only processor of size and this plant is strained financially. It is not in a position to undertake new product developments. This company probably needs a complete overhaul in its operations. It does have a marketing company that sells its products and together with the processing division would need new directions.

The opportunity for smaller processors exists with some of these being producer owned. A small company in Peje is developing a line of jams, and this firm could have the opportunity to expand. GMP would be useful for this operation and others like it.

Pestova is an innovative company that has received a lot of technical assistance from the Europeans. A firm in the U.K advised the company on its new potato processing line. The French fry plant has been established but did not operate in 2003. This company provides a case study on how to properly implement new technology. A concern exists about the advisability of the investment in the French fry facility for several reasons. First, the company is active in several potato related ventures (equipment dealer, seed distribution, production, and processing). It is unclear what their business focus is besides being in potatoes. Second, Pestova is successful as a fresh packer of potatoes in both Kosovo and to neighboring countries. This business will likely grow if given the necessary attention by management. (Workers were seen sitting on the floor bagging potatoes with the packing machine not operating.) Third, the processing plant (small) can do chips and French fries but is only viable when the fresh potato price is low (estimated to be €0.10 to .125/kg (personal communication with IFDC staff). The cost of production of potatoes reported by CECI is €14/kg. Last year the fresh potato price rose to around €0.27/kg. Kosovo is unlikely year-in and year-out to be a low cost producer of chip potatoes. The processing plant is probably a case of receiving low interest credit provided for the purchase of EU equipment. Vertical integration by Pestova into processing, though it has management advantages, is not always a sufficient reason by itself to justify the additional investment. There are examples of many firms that have vertically integrated and then chosen to reduce the scope of their business. With only limited information to go on, this investment in French fries may not be appropriate where the focus should be on a fresh pack business which is in itself a form of vertical integration because of the packing line. The fresh pack business will

likely subsidize the processing venture in the intermediate time period. Pestova is likely a case of too much technology chasing a business concept without examining the necessary costs and returns under production and marketing risks. Pestova should be looking at ways to contract raw production for its potato processing to reduce supply and price risks which they are not willing to do at the present time. KBS is assisting in installing a cost accounting software for the company. When this is done and costs can be partitioned appropriately and accurately then better guidance can be given to the company on capital investments for new ventures.

A similar example where technology was promoted out of context is the donation by a German NGO of a cold room to the Anadrini Farmer Association. The cold storage room is too big and the cost of electricity is too high for the proposed operation. The cold room has never been used by the association because it is not economical to operate.

5.4. Wholesalers and Distributors

The wholesale distributor industry is important to the development of certain commodities, especially vegetables and fruit. Marketing remains a major issue. Perishable commodities require immediate sales, and there is not a prominent processing industry for producers to contract products. Producers rely on wholesalers to purchase and resell to other small wholesalers or to retailers. It is an industry group that is important and probably has been overlooked in the assistance process.

5.5. Retailers

There are about 50 supermarkets in the main towns of Kosovo (KBS). There are large format supermarkets emerging in Kosovo, but they have lagged behind other countries in the FYR like Croatia and Bosnia. The supermarkets are becoming the driving force for the food industry in these markets, and they are pulling others along in the marketing chain to modernize. The team visited several supermarkets in Prizren and Prishtina. At Ben-Ef, the manager indicated a willingness to purchase local agriculture products but required quality and consistency in volumes. He reported that his store purchased only local potatoes and would like to do this for other agricultural products. The manager complained about the packaging of local products, and this needed improvement. For the time being, relationships would have to be developed and the use of forward contracts is unlikely.

6. ORGANIZATIONS AND THEIR METHODS IN DELIVERY OF TECHNOLOGY

6.1. Public Sector Organizations

The assessment examines institutions in the public sector as to their capacity to deliver technology. The public sector organizations are getting or have gotten donor funding to conduct their operation. None of this group is sustainable without outside resources.

6.1.1. Ministry of Agriculture, Forestry and Rural Development (MAFRD)

MAFRD has a staff of about 380 with about 250 of those in the forestry area (Winters). The budget in 2004 is expected to be in the range of \$8.6 million (Winters). MAFRD has a very low capacity at the present to develop and diffuse technology. MAFRD is working towards the development of a scheme for agricultural/rural advisory services. The EAR SASS is a two-year project to implement this advisory service. Some of the advisors would be deployed through producer associations and cooperatives.

The EU is also supporting MAFRD in conducting agricultural policy. The ASPAUK project is to establish a policy unit. MAFRD with the assistance of IFDC established crop demonstration plots. There were 120 plots of winter wheat and 90 plots of maize. The plan is to have 30 demo plots of spring wheat in 2004. Yield data has been collected. MAFRD has the potential to be more effective in the delivery of technology to farmers.

6.1.2. Municipal Government

There are 30 municipalities in Kosovo. Each municipality has a local agricultural development department. These entities normally have two staff assigned to agriculture who have few resources and are not viewed as being effective at the present time. EAR-SASS program has a budget of EU 300,000 to support the purchase of equipment, training materials, and study tours for agricultural extension.

6.1.3. Regional Vocational Training Centers

The Ministry of Labor and Social Welfare has eight Regional Vocational Training Centers (RVTC). The ILO and Italian government support the program. The training centers deliver training programs to adult unemployed in private occupations. The capacity is to train 1,000 persons per year. There are twenty-one skill areas including agricultural products transformation. Agribusiness vocation is not a popular area as youth and adults seek employment in urban areas. It is envisioned that the RVTC will establish relationships with commercial processors for in-plant training that would be useful. There is a reasonable working relationship between the RVTC and municipalities.

6.1.3. Agricultural Faculty at Pristina University

Agricultural Faculty at the University in Prishtine offers opportunities for developing the agricultural sector. The university takes in about 100 students each year including 20 veterinary students (Greenbook). There are six sections in the agricultural faculty. The university also has laboratory facilities and is capable of conducting lab analyses. The university offers a reservoir of talent that could be utilized for diffusion of improved technologies. Unfortunately, the salary of professors is so most have to take outside jobs. Professors consult to commercial producers and to farmer associations.

6.1.4. Overseas Education Training

Students have received Cochran and other fellowships for advanced degree training in agriculture in the U.S. and the EU. These students have returned and taken important positions in the government, academia, and private and non-profit organizations. These professionals contribute to the development of the agriculture sector.

6.1.5. Kosovo Institute of Agriculture

Kosovo Institute of Agriculture (KIA) at Peje plays a role in the field of applied agricultural research. The institute plays a supporting role by testing for standards and quality (soil tests, etc.). The institute conducts adaptive research and tests and certifies seed and other inputs entering Kosovo. The institute at the present is undergoing administrative change. There are EU projects supporting the institute. The research facility is in need of upgrading of facilities and its technology.

KIA has 5 departments: husbandry and vegetables, tree fruit and vineyards, crop protection and environmental protection, and agro-chemicals and soil analysis. A laboratory supports these areas with soil analysis, food analysis and phyto-sanitary and virology examinations.

Equipment is on order for conducting food analysis. LOL has agreed to conduct training of staff in March, 2004 on use of the equipment for meat and milk products.

The lab is doing wine certification for trade with Germany but other certifications are not possible at this time. MAFRD must authorize KIA to do the certification for the country which has not been done for other commodities except wine. After authorization, KIA can then seek third party certification as a licensed laboratory. This process could begin in 2005 but will take several years to complete.

A function for the KIA would be to move proactively to being demand driven and seek out different operational modalities than currently in place. This could involve being a quasi-government organization with more emphasis on profit drivers, such as charging for soil testing. HACCP training and testing could be part of its mandate. Residue testing of food products could be included as well. There are examples of labs in the USA like NutraClean and PrimusLabs that are important in the good management practices and seals of approval.

6.1.6. Lipian High School Technical Center

There are three agricultural high schools. Lipjan high school has a student enrollment of 1200 students and 86 staff members. The school serves two functions: first, education of its students; and second, extension (outreach) activities to farmers. The school receives donations from EU countries for construction of facilities and a small monthly grant of €150 for extension seminars. Extension activities include 10 trainings per year of one day each for 15-20 farmers. The school has a small operating dairy and 30 HA of land at the school. The municipality donated another 30 HA near the school. IRC is assisting by establishing a demonstration apple orchard. The school can be a catalyst for transferring technology to farmers throughout Kosovo. The school has the opportunity to improve its program in education and technology transfer with a complement of laboratory equipment for the simple testing of feed rations, milk and milk products. The estimated cost of the equipment is €15,000.

6.2. Private Sector Organizations

6.2.1. Farmer Associations and Farmer Clubs

Farmer associations (FA) have been established but are weaker than expected with a loose relationship with their membership (CECI) Promoting adoption of new techniques through extension agents working with FAs is proving challenging to obtain the expected outreach. (CECI) Information on Anadrini Farmer Association was collected during field visit to the office. Anadrini has 202 members and each member pays €10 due per year. The association is delivering technological improvements to its members. The association supplied €45,175 of inputs to its members in 2003 (Table 6.1.). This amount is planned to increase in 2004 with assistance from CECI. Anadrini exported members' vegetables to neighboring countries. Peppers were the only export product and the value of sales increased each year for the past three years (Table 6.2.). The organization is currently not self-sustaining because of the amount of donor grants it receives. (Anadrini Business Plan, 2004 – 2006)

With the assistance of CEDI, KDC, and KBS efforts are underway to form a potato growers association that would link with Pestova Company. The potato farmers are seeking legal counsel to become registered and to begin to negotiate for next season's harvest. A potato expert has conducted a workshop on harvesting and storage of potatoes.

Table 6.1. Value of Agricultural Inputs Sold to Members of Anadrini Farmer Association, 2003

| Type of Agricultural Input | Value (€) |
|--|-----------|
| Hybrid Seeds: tomatoes, cabbages, cucumbers, cauliflower, carrots, watermelon, melon and peppers | 15,250 |
| Plastics | 5,325 |
| Irrigation Equipment | 6,750 |
| Agricultural Mechanism | 4,550 |
| Pesticides | 3,300 |
| Material for Packaging | 10,000 |
| Total | 45,175 |

Source: Provided by Anadrini Farmer Association, February, 2004.

Table 6.2. Vegetable Exports by the Anadrini Farmer Association, 2001 - 2003

| Commodity | 2001 | | 2002 | | 2003 | |
|---------------------|------|--------------|------|-----------|------|-----------|
| | qty | Value (D.M.) | qty | Value (€) | qty | Value (€) |
| Peppers (to Alb) #1 | | | 60 | 18,000 | 60 | 21,000 |
| Peppers (Mac) #2 | 55 | 19,250 | 125 | 31,250 | | |
| Peppers (Mac) #1 | 60 | 24,000 | 85 | 25,500 | 140 | 49,000 |
| Peppers (Serbia) #2 | 40 | 14,000 | | | | |
| Peppers (Serbia) #1 | 80 | 32,000 | 145 | 43,500 | 130 | 45,500 |
| Peppers (Switz.) #3 | | | | | 20 | 8,000 |
| Total | 235 | 89,250 | 415 | 118,250 | 350 | 123,500 |

Source: Provided by Anadrini Farmer Association, February, 2004.

Note: #1 Peppers of "Kurtovska Kapia variety. #2 Peppers of "Shorokshari" variety, #3 Peppers of Shorokshari, Duga Bela, Somborka, and Kurtovska Kapia varieties.

Farmer Clubs (FC) are planned as a new approach to build upon the success of demonstration plots with Lead Farmers (LF). The LF model has proven to exceed expectations and by evolving these into FC may increase the transfer of information (CECI). Training and extension services should be channeled through the FC. Credit will be a limiting constraint for FC members to adopt new technologies like the tunnel-mulch-stake system. NBFi may be a source of funding for these investments.

6.2.2. Industry Associations

The Alliance of Kosovo Associations (AKA) is the apex organization for six industry associations: Dairy Producers and Processors, Agriculture Input Dealers, Flour Millers, Honey Beekeepers, Poultry Producers and Feed Millers, and the Vegetable Producers. There are other independent associations that have not joined AKA. The AKA has a monthly overhead cost of €1,000 which they cover from membership fees. The AKA has untapped potential.

6.2.3. Food Processors

Food processors are emerging in Kosovo and adopting new technologies. The industry could be stratified and clustered with those firms that have good technology and practice GMP and those firms that do not. In the case of dairy, there are about six plants in the former category and about 14 plants in the later category. Some of these processing firms have been responsive to producers by encouraging the development of supportive services, e.g. milk chilling centers, and using some forms of forward contracting with producers. Others have not been progressive. ABI in Prizren and Devolli in Peja are progressive in the use of forward contracts for milk. There are over 80 flour mills but only about 40 are operating. LGB slaughters and processes meat but has not been progressive in working with producers. The company imports large amounts of imported meat. The company decided against signing forward contracts with beef fatteners and dropped their offer price for fat cattle. Pestova would like to use forward contracts for potatoes but will not commit to a forward purchase price.

6.2.4. Wholesalers/Distributors

The wholesale industry has remained relatively unchanged in Kosovo. Wholesalers are active in all industries and have the typical trade mentality – turnover products as rapidly as possible without incurring additional costs. The use of refrigeration is not common among wholesalers. Wholesalers play a role in purchasing from producers, but they are not likely to play a key role in transferring technology innovations forward or backward in the marketing system.

There is a vegetable traders association and the president of the group is the general manager of Anadrini Association in Prizren. The association receives technical assistance from CECI and KDC. The association is functioning at below its potential.

6.2.5. Retailers

The food retail industry has the potential to be an effective force in driving the agricultural sector to modernize. Retailers have stated they need better quality and packaged products from Kosovo. The large retail format stores are slowly appearing and with time they will have greater power dictating standards which will require improved technologies by firms up-stream in the marketing channel.

6.2.6. Non-Government Organizations (NGO)

There are 1,500 NGOs registered in Kosovo (only about 300 are now active), and they play an important role in the transfer of new technologies. NGOs have carved out technical specialties and geographic areas to work. Being a small country, there is overlapping of efforts in some geographic areas. NGOs have done a good job in training producers. Particular technologies, like silage production and the use of concentrates, have had good adoption rates. NGOs have worked with farmers to establish demonstration plots set up in communities. This increases the adoption rate. Lead farmers have been instrumental in assisting in the diffusion of these new technologies. NGOs can play a role in connecting buyers and sellers. NGOs have been a

clearinghouse of information as well as provide some facilitative functions (information gathering, contract delivery, reducing transaction costs, credit support and loan guarantees).

6.2.7. Input Suppliers

There are approximately 300 input dealers in Kosovo (personal communication with Xenia manager). The dealers sell seeds, fertilizers and pesticides. These are imported items. In an interview with a dealer (Mufail Salihu), he said that sales of fertilizer have increased but seed and pesticides sales have been flat. Most sales management is done at the store (he has three) because the cost of travel to farms is too costly. His extension activities are limited to distributing publications he gets from associations (Association of Fruit Growers), conducting seminars at his shop, and to a few ads he places in newspapers. It is unlikely that input suppliers can be significant agents for new technology.

6.2.8. Commercial Banks

Commercial banks have been reluctant to play a large role in the agricultural sector. In interviews with Raiffenzen and ABU banks, managers said that urban markets have become saturated and banks will look at agriculture more closely. The banks do their own loan preparation process but will contact professional in the field of specialty to determine if they are serious producers. Advisors in AKA are asked to provide a reference for a loan applicant. Commercial banks are beginning to lengthen their loan repayment up to four years but no grace periods at this time. ABU bank provides about 200 man-days of technical assistance each year in business plan development.

6.2.9. Non-Bank Financial Institutions

A number of NBFIs are active: BESLIDHJA, KEP, FINCA, ADIE, and AfK. These financial institutions are important to providing loans. The Agency for Finance in Kosovo (AfK) targets small and medium commercial enterprises (SME). AfK benefited by a grant of €450,000 from the monetization of U.S. commodities managed by Mercy Corps. AfK focuses on promoting businesses that have strong income generation potential that will create long term jobs and growth of the economy. AfK is having success in making loans in the agricultural sector that are fully commercial and that support competitiveness rather than dependency. Some clients are on their third or fourth cycle of loans. The portfolio of their loans supports SMEs at all levels of the agricultural business system. In the beginning AfK offered training in developing a business plan to selected applicants, with over 200 people attending half-day sessions.

FINCA is another NBFIs that has been successful. The organization is sustainable and focuses on their village lending program. FINCA is in a position to help promote the LF and PF approach to commercial agricultural production.

6.2.10. Business Development Services

An interview was conducted with the staff of the CBDC (Community and Business Development Center) in Gjakova. This firm has transitioned from fully donor supported to being an NGO

offering a wide spectrum of business services to its clients. Like other BDS firms, CBDC is struggling to find “fee based” clients. The firm has successfully conducted workshops for CARE and KBS. CBDC has also successfully assisted firms in obtaining bank loans. CBDC is a model for a BDS mentioned in the recommendation section of this report.

The SOW asks whether development of business resource centers supported by USAID in Ukraine are appropriate in Kosovo. The Kosovo situation is different and it’s unlikely that the Ukraine model would be effective for several reasons (Winter). First, BDS firms are operating and they are struggling to find their niche in the market place. Second, Kosovo is a small country, and a BDS firm can cover many towns in Kosovo. Third, EAR-SASS is funding a program in MARFD to strengthen the resource capacity of municipalities to conduct outreach programs and to establish a private agricultural advisory service. It is important not to create redundant, non-sustaining interventions.

6.2.11. World Bank

The World Bank is looking at supporting the agricultural sector. Areas of interest are support to business advisory services, small grant programs to develop and test new technologies and support of NBFIs and banks for access to available credit. USAID could coordinate with the World Bank on their new project.

6.3. Information Delivery Systems

6.3.1. Radio and Television of Kosovo (RTK)

RTK has an agricultural communication specialist whose job is to communicate interesting projects focusing on the agricultural sector. The show airs every Saturday and seems to have a good awareness among producers. For example, RTK did a television spot on fruit growing in the Peja region. After the show the producer told of several fruit wholesalers from Pristina who came to his farm to inquire about purchasing his fruit. In discussion with the RTK specialist, he would like to expand the length of his weekly show to provide more applied information for producers such as reporting market prices for selected commodities.

Media approval by USAID for NGOs to release agricultural information and stories to the media is cumbersome and time consuming. The protocol creates a barrier to quick response by NGOs under the KAP project to be innovative and creative.

6.3.2. Video Training Materials

NGOs are providing videos that are used to train farmers. It was mentioned that there are several on dairy production. Farmers like them as a teaching tool for their convenience and quality.

6.3.3. Study Tours

SCF cooperators conduct study tours. Some study tours have been as simple as taking farmers from one part of Kosovo to another to visit other farmers. Farmers reported that these visits were beneficial. Tours have been conducted within the Balkan region to examine what other USAID projects are doing. Dairy projects in Albania and Macedonia were visited. Finally, study tours have been conducted outside the region to Europe and to the U.S.A. A group of participants went to the USA to tour poultry processing facilities. Processors are willing to pay part of the travel costs, and this is a good sign of the effectiveness of these tours.

6.3.4. Internet Access

Farmers and processors are using the internet on a limited basis to access information and to network with other professionals. Municipal government offices have internet access, but officials reported they are unsure how extensively being used. Processors use the internet for marketing contacts.

6.3.5. Mentoring Entrepreneurs

Entrepreneurship is not well developed in Kosovo. RVTC offers a one-day awareness program in secondary schools in the subject. This is not sufficient to encourage people to look for jobs in the private sector. Commercial processors have a particular need to stretch their level of knowledge, expand their networks of contact, and assimilate the latest business skills.

7. CONCLUSIONS AND RECOMMENDATIONS FOR ENHANCING THE TRANSFER OF TECHNOLOGY

Conclusions on the state of technology, network systems and marketing are summarized.

7.1. Conclusions on The State of Technology Innovations in Agriculture

- There is clear evidence that technological innovations are occurring in agricultural industries in Kosovo.
- Improved seed varieties (cereals, maize, and vegetables) are common in Kosovo.
- Animal genetics are improving the productivity of broilers, layers and dairy cattle.
- Variety of selection of fertilizers is improving yields of cereal crops.
- Food quality and safety are still below acceptable EU standards.
- Market information is not widely available.
- Marketing contracts between producers and processors are used on a limited basis. Lack of an effective legal system slows the rate of market contracts. Processors may or may not offer forward contracts with stated prices for certain quality standards. At the present time this is being done on a limited basis in the dairy industry.
- Innovations need to be relevant and seen as needed (demand-driven) by commercial processors. The example of the cold storage unit for the Anadrini Farmer Association and the greenhouses supplied by French Solidarity are examples of technologies that were not appropriate and demand-driven.
- Farmers can be the best trainers and advocates for new technology.

7.2. Conclusions on the State of Information Networks and Delivery Systems

- It is unlikely that commercial processing firms have the capacity to deliver technology to up-stream producers of raw agricultural products. Processors would prefer to set product standards that producers need to work to and then pay premiums and discounts for products delivered.
- Diffusion of technology has to be differentiated by the target audience within segments of an industry: producers versus processors. Producers have more problems obtaining a full package for technology to be effective including credit that slows the rate of technology adoption. Farmers get frustrated with hearing about good technologies only to be unable to obtain the credit to purchase the technology. This situation is likely to change in the future with the easing on restriction in access to credit.
- Delivery of technology has to be done directly with farmers, – there has to be some “hand holding”, at least for a period of time. This is less true of processors, wholesalers and retailers who tend to be more savvy, educated and wanting to maintain their business independence.
- For commercial producers, the best extension model is for on-farm demonstrations and the use of lead farmers with their participating farmers. The benefit-cost ratio of this model is expected to be higher than the use of international technical experts. The cost of international experts would dictate that their time be targeted to training of local experts, local NGO staff and MAFRD personnel rather than mainly in the field with an individual producers.

- For commercial processors, the best adoption diffusion method would be demand-driven by each client requesting the necessary technology. Entrepreneur training is important for business development. The investment return on international experts working with plant managers is very high but must be carefully targeted so that the expert does not become a burden on the daily operation of the plant and its personnel. The expert needs to work with a significant number of plants to be cost effective.
- Progressive farmers of various sizes of operations are being exposed to new technologies. The source of this information seems to be primarily from the private sector and NGOs. MAFRD is not a significant player in extending technologies at the present time.
- For effective delivery of technology, it is necessary that new paradigms be considered. For example, local NGOs can take on an integral role in supporting market transactions. The position is as an insurance company to prevent the innovative commercial farmer from suffering a financial loss because of a market down-turn during the testing period.
- The use of international technical experts needs to be evaluated. The observation is that this resource needs to be assessed to determine its effectiveness. It seems that at times when funds are in surplus, international consultants are used to mop up surplus funds. It may be worthwhile to look at using less international experts and target them to intensive training of local consultants and others who can work with demonstration farmers.
- Commercial processing plants have a real need for international technical experts for short, intensive periods for the demand-driven needs of the processor. The international expert can target several processors during a visit.

7.3. Conclusions on the Market Systems for Agricultural Products

- There are market disconnects between producers, processors, and the end market users. Opportunities are missed by fragmenting the sector, even among allied industries. The example is the missed opportunities between sunflower producers and the oil pressing plant.
- Price information is limited and results in inefficiencies in making the best marketing decisions.
- Simple grades and standards are not established resulting in price signals being distorted.
- Market systems are buffeted by imports that reduce profitability for a product within a season. This is due to the open borders for Kosovo.
- More market demand and promotion work can be included in the development of a sector. For example, generic advertising of local products, export promotion of niche, specialty products, targeted promotions (school milk programs) will improve the results of technology adoption at all levels of the market system.
- A demand driven focus from end-users connected to primary suppliers will produce greater impacts to a wider set of participants.
- There are key entry points into the system with backward and forward linkages. This entry point can have a gravitational pull for increased participation by other businesses. The entry point at the commercial processor level is reasonable with follow-on linkages up and downstream firms in the market channel.
- Key legal barriers, e.g. contract law, needs to be addressed if there is to be an improvement in the market system and if the use of forward contracts and other marketing tools can be used to improve the competitiveness of agribusiness firms.

- Applied agricultural research is a cornerstone of supporting technology development. Without this renewal of the knowledge base, technology infusions become degraded over time.

7.4. Recommendations

Recommendations are presented that support technological innovations within a comprehensive market development program.

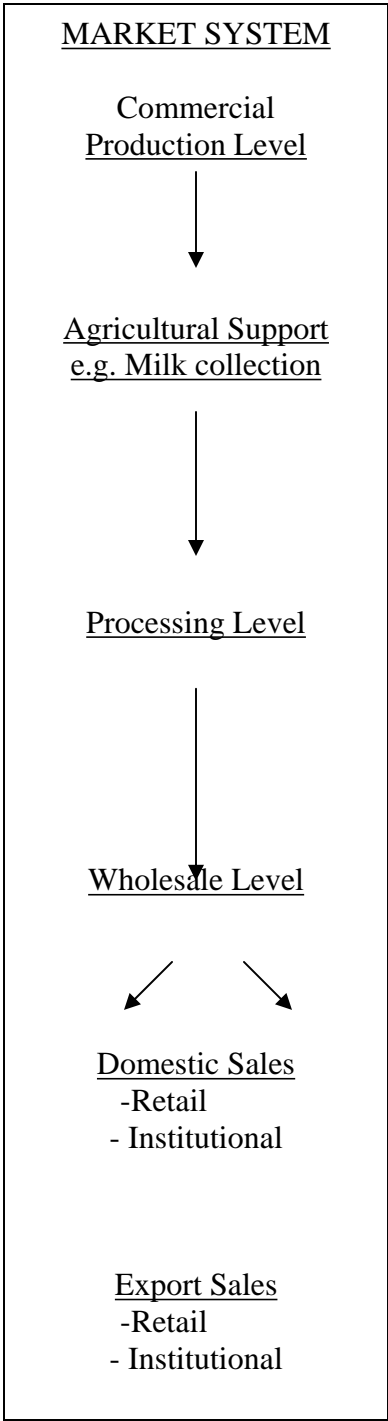
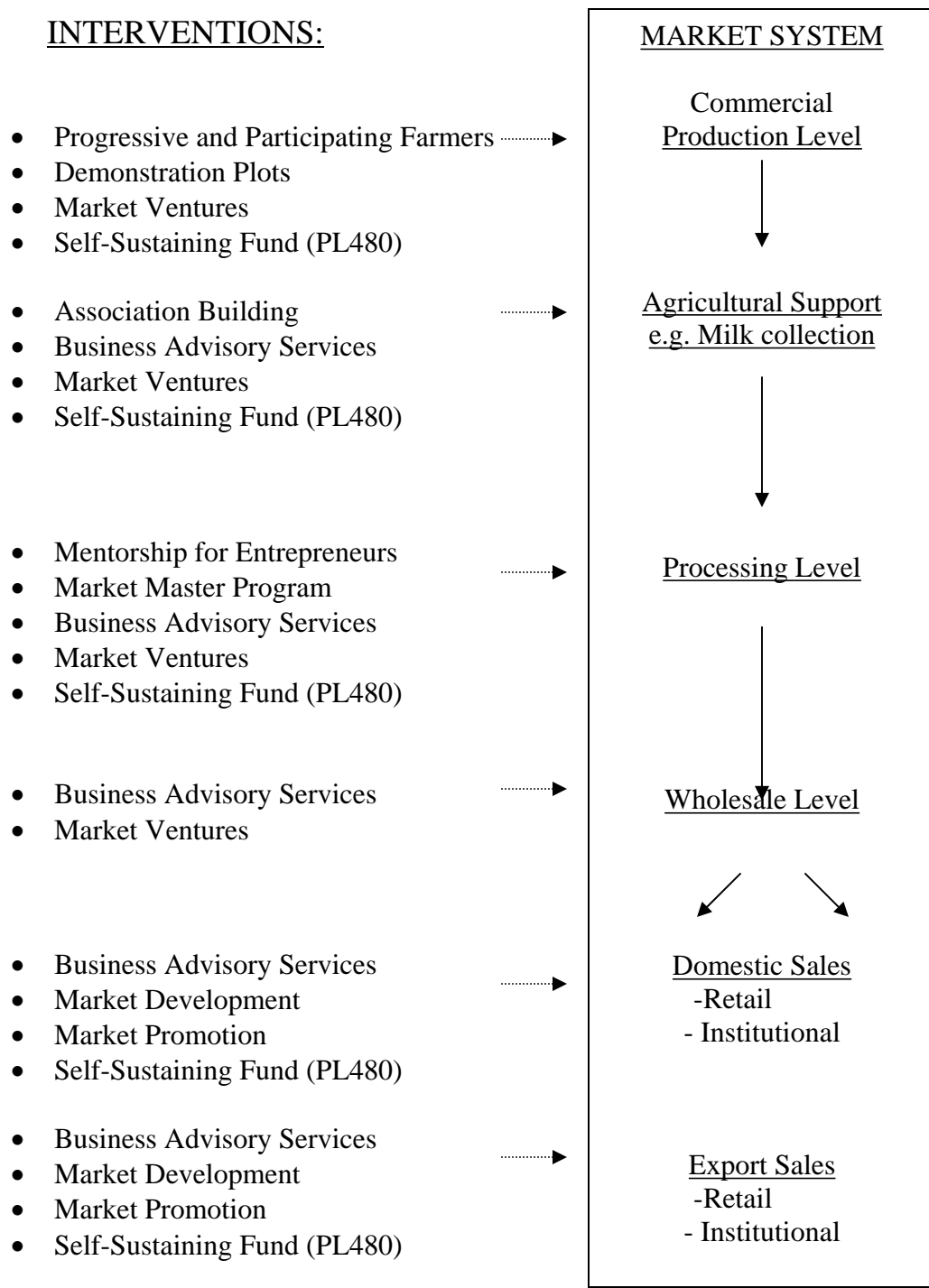
7.4.1. Sector Approach

USAID needs to focus on sectors that have the real potential to generate profits and jobs and not merely propagate subsistence farming (personal communication with AfK). Selecting which agricultural sectors have the potential to generate real profits and jobs requires an understanding of European subsidies and the inter-linkages between production, support services and processing. A long-term perspective by USAID should be taken built upon a sector strategy plan. Two potential agro-industrial sectors are recommended for a strategy plan: livestock-dairy-meat and horticulture.

7.4.2. Systems Approach to an Agribusiness Sector

A systems approach is recommended that focuses on all components of the sector and their relationships: agricultural production, agricultural support, and agricultural processing. (Chart 7.1.) The lack of an integrated set of tactics in the past USAID programs needs to be replaced with a “system-wide” integrated approach that would bring more impact to the commercial participants in the sector. USAID can then put its full weight behind supporting the strategic sectors.

Chart 7.1. Illustration of Integrated Approach to Diffusion of Technological Innovations in Kosovo’s Agribusiness Sector



7.4.3. Increasing the Competitiveness of Commercial Agribusiness Processing Firms (IR1.3.1.)

An integrated development program is recommended which targets commercial agribusiness firms. A schematic of the programs is illustrated in Chart 7.2. The focus of the overall strategy is centered on commercial agricultural processors. This group of firms would be the catalyst for increasing the competitiveness of the agricultural sector. The success of these firms will only be possible if they are linked to viable commercial production firms. Commercial processors need to focus on developing markets for their products in both the domestic and regional markets. A business environment must exist that allows commercial processors to emerge and compete.

7.4.3.1. Good Manufacturing Practices (GMP) for Commercial Processing Companies

Commercial processing firms require the know-how in good manufacturing practices. The companies need to meet international standards in quality and product specifications. USAID should continue to support commercial processing plants with HACCP training, developing of SSOP, and possibly registration for ISO9000 when appropriate. International technical experts would be appropriate in this effort. BDS firms and AKA could facilitate this program.

7.4.3.2. Support the Linkages Between Commercial Agricultural Processors and Lead Farmers (LF) and Their Participating Farmers (PF)

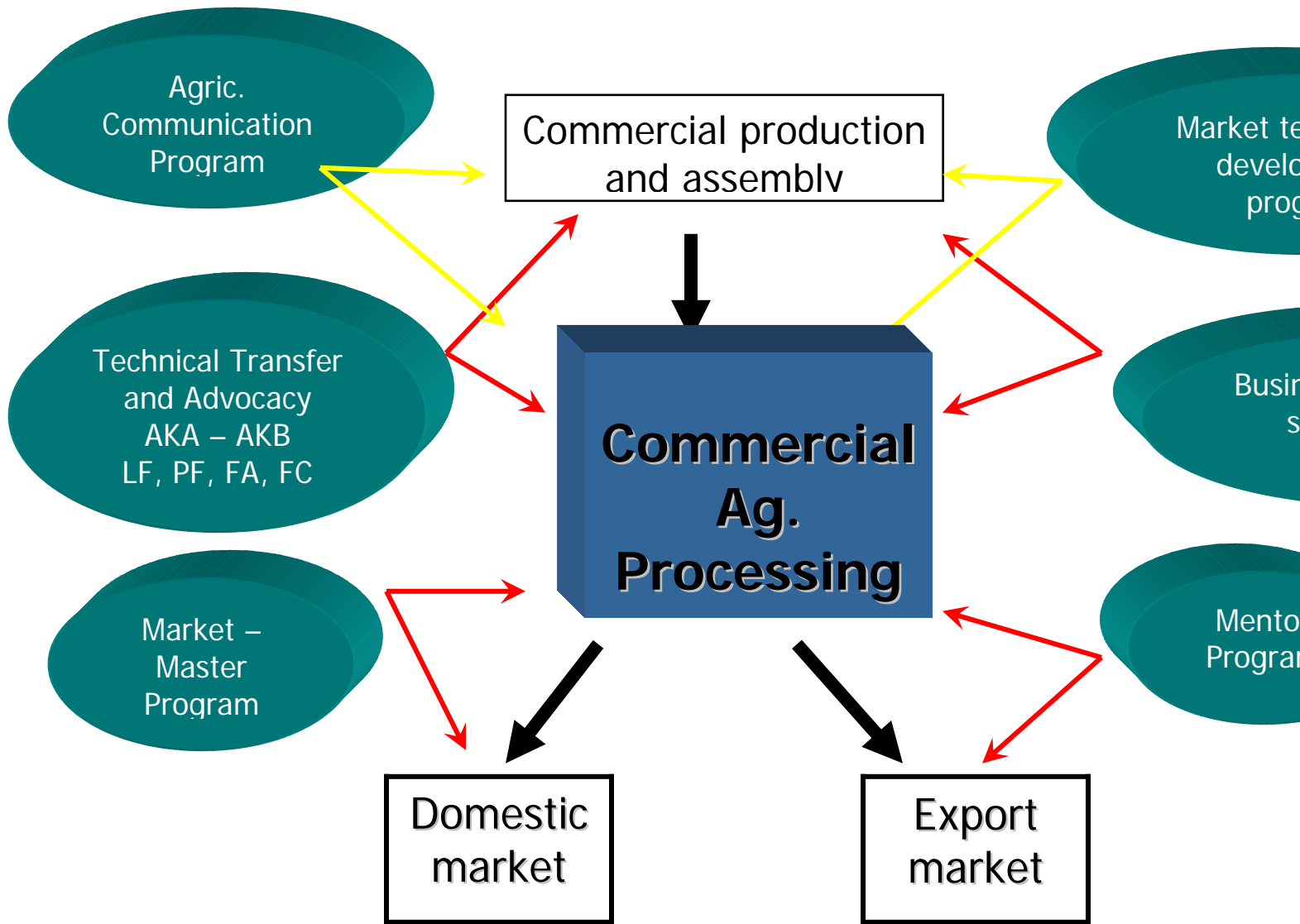
USAID should continue to support and expand the extension model of Lead Farmers (LF) and their participatory farmers (PF) in the effort to supply commercial processors. The LF model can be a conduit for information, demonstration plots and other delivery of technical information to their PFs. The relationship of H & H Dairy, participating farmers and Devolli Dairy Processing is certainly a good example of this producer – processor model. These farmers can be linked to processors through the use of forward contracts or delivery orders. These farmers may evolve into a Farmer Club (FC) that could negotiate with a commercial processor to deliver an agricultural product. Technical support for LF and PF farmers would be through technical outreach programs of the AKA, BDS firms and local consultants on a “fee-for-service” basis. Farmer Field schools could be implemented to support the LF model. Funds from a P.L. 480 program to monetize commodities would support this program.

7.4.3.3. Support Linkages Between Commercial Agricultural Processors and Farmer Associations (FA)

Farmer associations (FA) can be supported that have the desire to link to commercial processors. The assistance should be demand driven by their need to meet the needs of a processor or to take on processing themselves. Selected FAs that show the capability to market its members’ products would be assisted. Technical assistance to an FA would be channeled through the commodity associations under AKA, BDS firms, and local consultants on a “fee-for-service” basis. The FA can be a strong advocate for necessary changes in agricultural policy through its membership in

Chart 7.2.

SCHEMATIC OF INTERVENTIONS FOR DEVELOPING COMMERCIAL AG. PROCESSING INDUSTRY



the AKA. Monetization of USDA commodities could support this program. Funds from a P.L. 480 program to monetize commodities would support this program.

7.4.3.4. Support the Linkage Between Commercial Processors and Chilling Centers and Packing Sheds

Milk chilling centers (MCC) and packing sheds are entry points for opportunities to commercialize the dairy and horticulture sectors. These commercial entities will serve as important engines of economic development in the rural communities. MCCs and packing sheds are business models for mobilizing individual commercial producers and farmer groups into viable commercial entities. These commercial entities would also generate a demand for other ancillary private business services to emerge, e.g. a feed supply outlet, veterinary clinics, NBFIs, and other small businesses involved in general trading. Business skill development and financial and marketing feasibility studies are necessary before undertaking this type of assistance. Monetization of P.L. 480 commodities could flow into a fund to support community work share programs to construct the necessary infrastructure, e.g. building for a chilling vat, shed for selling produce, storage for potatoes, apples, and onions. The program can be modeled after the USAID's dairy assistance program in Albania.

7.4.3.5. Venture Fund for Market Programs

USAID could kick-start emerging agribusiness processing ventures by encouraging new business deals that will coordinate buying and selling activities. This role may involve establishing a market transaction between two to three parties (producer, processor, financial institution). This could be done in several agro-industries. For example a production contract can be developed between the sunflower processor in Ferizaj, medium to large sunflower producers, and a commercial bank. The processing plant contracts for sunflower seed. The financial institution extends the credit to farmers based on signed contracts, and the plant pays for the sunflower seed (part to the bank and the remainder to the farmers). In the first several years, USAID could provide a guarantee to the bank that the farmers' loans would be repaid. The venture fund would allow testing of innovative marketing concepts and insure that a safety net is in place for farmers to repay the loans. The objective is to encourage improved linkages between commercial producers and commercial processors. Forward contracts should be tested as a marketing tool. The venture fund could also support export market initiatives between a commercial processor and an overseas buyer with a financial bank extending credit for the venture. Monetization of commodities could support the venture fund for these market tests.

7.4.4. Improve Capacity of Commercial Agricultural Processors (IR1.3.2)

It is important to speed up adoption of technological innovations, and this will happen only when a complete technical package is offered to commercial processors.

7.4.4.1. Agricultural Information and Communications

The dissemination of information is key to increasing the awareness level about good agricultural and management practices. NGOs have been successful in distributing newsletters on new technologies. A manual for commercial production and processing based on the reports from international technical assistance would be useful.

Development of forward contracts between commercial processors and producers requires better market information. This information could support the development of a sunflower production – processing market venture and other projects. The establishment of contract prices would have to be done on the best available cost and market information, both inside and outside Kosovo. BDS firms doing the market intelligence on regional and Western European markets can distribute the information into the public information system, e.g. RTK, regional radio stations and Swiss Intercooperation’s electronic network.

7.4.4.2. Labeling and Testing of Food Products - Imports and Exports

The commercial processing firms are under severe pressure from imported food products. These firms need to improve the quality of their products as well as be more productive so as to be price competitive. A food testing and certification process would have two important impacts on the agro-processing industry in Kosovo. First, it would encourage processors to improve their processes and products to meet international grades and standards. Second, it would establish a needed protocol for rapidly testing imported agricultural inputs and food products. There are currently no “food certification” requirements for food products coming into Kosovo. Laboratories at KIA in Peja and at the University of Pristina are institutions that could provide the testing and certification services for private companies and for the customs service. These public institutions could be assisted to move to a demand-driven business model (quasi-private) to be more effective and responsive.

Investments in private food testing labs may be established over time. The certification progress could be blended into a program that is directed at commercial processors with the capability to export within the region and to Western Europe. The following steps could be considered for accelerating trade in the Balkans and Western Europe.

- Market research can be conducted by BDS firms, associations, and other institutions on potential Kosovo products for the export market. Associations would be a vehicle to provide export market services.
- A key firm within an industry producing the target products can be identified as a leader of a cluster of processing firms. This firm, if it is deemed capable to export, would receive intense assistance (see the description of the Market Master Program and

Mentorship Program.). A demand driven program would be implemented with processors but involving producers, wholesalers and marketers as well.

- A testing and certification program would be established for the import and export of products using current laboratory facilities. Branding and Seal of Quality (SOQ) programs should be developed in conjunction with existing and emerging testing lab facilities.
- Export programs based on market research, testing and certification and product branding should be supported with technical assistance, business loans and grants.

7.4.4.3. Business Development Service (BDS)

Several private sector BDS firms have emerged. These companies need to be strengthened to support commercial processors and their linkage to agricultural producers. BDS firms are important to the development of the agribusiness sector. Private firms are gradually paying for business services if these services fulfill their requested needs. BDS firms can be sustainable only if they up-grade their professional capacity. They need to have a tight control over their costs. These companies need support with technical assistance. BDS companies can support commercial banks and NBFIs by assisting a client to be “bankable” and “loan ready”. A BDS firm can charge a fee for this service which can be applied to the amount of the loan. A BDS firm can work with commercial processors to design and implement forward contracts. This will require the BDS firm to conduct market intelligence.

7.4.4.4. Alliance for Kosovo Agribusinesses

The AKA and its affiliates can provide technical information to commercial processors. The six associations in AKA cover a large percentage of commercial agricultural producers and processors. The AKA could establish a separate entity for technical services under AKA with its own accounting records so as not to commingle its expenses with other AKA activities. This business could supply technical assistance to MAFRD when and if it establishes a voucher system for farmers to pay for private extension services.

7.4.4.5. Market Master Training Program for Entrepreneurs

A successful program for entrepreneurs in agribusiness has been developed by Texas A & M University and recognized by the American Agricultural Economics Association as a quality business program. The program uses the teaching models of group learning with case studies. Each entrepreneur develops a detailed plan for the business. The Market Master Training Program can be directed to both commercial processors and down-stream companies in the agribusiness sector (wholesalers, retailers and HRI companies that link with the commercial processor). The course would be conducted for four months with entrepreneurs meeting one day a week on weekends.

7.4.4.6. Mentorship Program for Commercial Processors

This program would focus on commercial agricultural processors who have the capacity and interest to sell products in the export market. The objective of the program would be to link a Kosovo business executive with an established business executive in the region or in the EU. The program would facilitate a relationship between these two individuals and their companies. An honorarium could be provided to the external mentor to compensate for time and effort. The objective is that this mentor would guide the local entrepreneur into the necessary networks in the target market. The result would be increased imports of capital equipment (an indicator for IR1.3.2.) and the adoption of international standards. Candidates for the mentorship program would be graduates from the Master Marketer program.

7.4.5. Improved Business Operating Environment for Commercial Agricultural Processors (IR1.3.3.)

7.4.5.1. Strengthen the Alliance for Kosovo Agribusinesses (AKA)

The AKA should play an important advocacy role for a better operating environment for all agribusiness firms in Kosovo. Issues on fiscal and trade policies should be addressed. It is expected that the improved business environment would see increased business activities, increased demand for debt financing, and possibly the establishment of foreign agribusiness companies.

8. APPENDIX

APPENDIX 8.1. SCOPE OF WORK

I. Summary

The purpose of this SOW is to conduct an assessment of existing and potential technology transfer and information networking mechanisms in Kosovo. The assessment will identify alternative interventions to be implemented under USAID's 2004-08 strategy, SO 1.3: Accelerated private sector growth and IR 1.3.1: Increased competitiveness of the agricultural sector. It will evaluate the performance of previous technology transfer techniques and identify the most effective and sustainable methods for expanding technology diffusion for geographic areas and agricultural products that hold potential for expanding output. It will also evaluate information networking and the spreading of agricultural input and output prices.

II. Background

The majority of Kosovo's agricultural producers were not allowed to benefit from advanced Western production technologies after the collapse of socialism. The majority of Kosovo's producers were severely constrained under Milosavic's campaign of ethnic discrimination and ultimately ethnic cleansing in 1999. Consequently, farmers throughout Eastern Europe have had more time to adjust and gain competitive advantage over their Kosovar counterparts.

Approximately 60 to 65 percent of Kosovo's population lives in rural areas. In December 2000, agriculture accounted for more than half of total employment (World Bank). The recovery of crop and livestock production has made a major contribution to post-war economic growth (IMF). Agriculture was the major source of employment prior to the war, with 50 percent of the labor force engaged in farming and a further 20 percent engaged in associated processing and service activities.

According to the macroeconomic unit of the Ministry of Trade and Finance, the agricultural sector contributes about 21 percent to total GDP, and consists primarily of home consumption. Approximately 80-90% of the agricultural land is utilized by "private" interests, mostly individual and family. The average holding is less than 2 hectares, and this is often fragmented into smaller parcels. Another 10% of the agricultural land in Kosovo is held by approximately 23 agricultural SOEs. These farms cover an estimated 60 – 70,000 hectares of the best agricultural land in the province. The balance of rural land is owned by the state.

Agriculture has the lowest labor productivity and the lowest monthly wage among all economic sectors - 88 euro per month. In fact, only a small fraction of this remuneration is even monetized. About 85% of food produced in Kosovo is consumed within the household and only a small amount is delivered to the market and sold for cash.

Although export markets remain a challenge, it is generally recognized that Kosovo could become more competitive against imported food products. Yield increases necessary to achieve a level of self-sufficiency or surplus for many basic farm commodities such as milk, potatoes,

etc., are, according to an USAID sponsored agriculture assessment, technically achievable (RAISE Assessment).

The greatest recognized constraint on agricultural production and development are economically irrational land tenure systems. However, efficiencies could be captured by improving producer efficiency within current land tenure parameters. Kosovar producers rely on inefficient, traditional technology. Present farming practices could be improved by adopting a range of new innovations, including improved varieties and pesticides, land tilling and spacing techniques, storage methods, etc.

Currently, farmers obtain most of their assistance through associations of donor funded projects and NGOs, which are costly in terms of farmer outreach and often unsustainable. The assistance has usually been communicated directly to participating farmers and through farmer associations, many of which dissipated upon expiration of the international sponsor.

The Ministry of Agriculture, which has been transferred to the Provisional Institutions of Self Government's (PISG¹), administers extension officers in conjunction with municipalities. State extension systems are nascent and poorly functioning, but comprise a network with expansive potential for distributing information and innovation. Local extension agents are poorly trained and paid. Extension services have not taken advantage of advances in communication technology to access information that responds to farmers' problems.

Confusion exists in Kosovo regarding the most effective modes of communication and technology transfer to Kosovo's agricultural producers. Farmer associations have met with mixed success and failure in terms of offering sustainable services to their members. The extension system has had very little demonstrable impact, but offers a network which can multiply communication and service efforts. This assessment will sort out aspects of all modes that merit targeted intervention – that is maximize expected return on investment in terms of improving efficiency and increasing agricultural output.

Markets are poorly coordinated and market information is also lacking in both input and output prices. Input suppliers have attempted to provide some extension services. However, input suppliers have an understandable preference for large farmers, which comprise a small minority in Kosovo.

III. Tasks

The purpose of this assessment is to develop recommendations for enhancing technology transfer that will improve the productivity and growth of Kosovo's agricultural sector. The assessment

¹ Since the end of the conflict in 1999, the political administration in Kosovo has been represented by the U.N. Mission in Kosovo (UNMIK). The Constitutional Framework, established in 2001, provides for a division of political and economic decision-making authority between the Provisional Institutions of Self-Government (PISG), which represent the elected Government of Kosovo and those institutions which report to the Office of the Special Representative to the Secretary General (SRSG). In the economic sphere, decision-making authority in areas of trade and investment, fiscal policy and administration, and commercial law are generally considered transferred powers. The areas of privatization, public enterprise management, utilities regulation (other than telecommunications), and banking regulation, are generally under the direct control of the SRSG wing of UNMIK

will identify effective interventions for expanding information networking for technology diffusion as well as market information on input and output prices in a sustainable manner. Recommendations are anticipated to encompass key areas for strengthening institutions and improving methodologies for information networking. It is expected that the recommendations will consist of a range of interventions as opposed to focusing on a single institution and/or mechanism for technology transfer.

Assessment of organizations providing extension services

Recommended interventions will be based on an evaluation of key institutional structures and the performance of existing technology transfer techniques and mechanisms. Institutions that currently have a role in agriculture to be included in the assessment include the University Agricultural Faculty, Peja testing and research institute, Lipjan agricultural high school, Ministry of Agriculture and Rural Development (MAFRD), Regional and Municipal Government agricultural extension officers, private agricultural associations, agricultural input suppliers, donor funded projects, and local media (television, radio, newsprint). The assessment will identify their methods of information dissemination. The interrelationships and interaction between institutions should also be assessed.

The key question to be addressed is what institutional modifications and changes in methodologies for information networking would improve performance? The following questions, while not exhaustive, should be taken into consideration:

- How effectively and efficiently are they performing?
- Does the information network of each institution provide a viable means for transferring technology to farmers? On how many hectares have improved practices been applied as a result of the institution's activities? What is the cost per farmer directly benefiting from the institution's activities? What is the demonstrated benefit relative to the cost? How can this be improved?
- Which extension methods (e.g. training and visits, publications, pamphlets, resource centers, etc.) are best suited for Kosovo by each institution given levels of education, farm dispersion, cultural norms, etc.? To what extent are these methods being used and how could they be expanded?
- What are the characteristics of comparatively successful institutions and/or agents that provide services to farmers?
- How successful have donors' efforts been in strengthening these institutions and enhancing technology transfer?
- How effective are farmer associations in terms of providing wholesale inputs and marketing output?
- Under what circumstances would the institutions be most efficient? Consider a range of interventions that would have impact in terms of transferring technology in Kosovo.

Institutions and/or mechanism not active in Kosovo but would enhance the agricultural sector should also be identified. For example, one model that utilizes advanced communication and computer technology was recently established in Ukraine. The Ukraine program equips extension offices with computer-based system of private farmer information. An agricultural

atlas or encyclopedia has been installed on all agent computers and is updated regularly. While sophisticated in content it is simple to use. This system enables agents to immediately answer questions regarding production technologies, crop varieties, crop pests and pest control, soils, climatic conditions, input needs and sources of supply, and animal breeds and animal diseases. It also covers a host of other technical and farm management issues such as accounting and calculating crop profitability. When combined with the market information and enquiry services provided via email linkages, the agent has a set of powerful tools to support private farmers.

- Does the model followed in Ukraine and/or other innovative mechanisms have applicability to Kosovo?

Marketing

Widespread uptake of improved technologies by farmers is dependent on economic gains from increased investments in production and marketed production. To augment USAID's understanding of progress toward strengthening agricultural market outlets, the following areas should be addressed:

- Evaluate the extent to which forward contracting is occurring between farm producers and buyers, including processors, restaurants, and wholesalers. Assess the extent to which forward contracting has resulted in increased agricultural production. Identify targeted interventions to stimulate forward contracting, mechanisms that could reduce buyer's transaction costs, and estimate the potential changes in agricultural output that could result.
- Review the Ministry of Agriculture and Rural Development's (MAFRD) progress in establishing needed product certification capacity. Based on this review, recommend how can future activities in certification be directed to accelerate trade in the Balkans and with Western Europe.
- Building upon existing information and reviewing current interventions, identify specific commodities and agricultural products that hold the most prospects for stimulating employment and income in the agricultural sector.

IV. Methodology

In addressing these questions the contractor will utilize an evaluation methodology plan that includes:

- A review of available materials.
- Key informant interviews with USAID/Kosovo, representatives of donors involved in agriculture and technology transfer, relevant donor and PISG representatives, municipal officials, association leaders, input supplies, and other members of the agricultural community.
- The activities of the assessment team will be coordinated by one specialist who will be responsible for synthesizing the findings into a coherent report.

USAID/Kosovo will provide a list of potential interviewees and information sources before and upon arrival in Kosovo.

IV. Schedule and Deliverables

A. It is anticipated that two consultants will spend four weeks performing this assessment. The consultants will spend 24 work days in Kosovo with an authorized six-day working week. USAID anticipates that the evaluation team will gain a solid familiarity with the issues related to technology transfer and information networking prior to the field work in Kosovo.

The Contractor will begin work at a mutually acceptable time, after consultation with USAID Kosovo. Field work should commence no later than February 1, 2003.

B. Deliverables

- 1) Within three working days after arrival in Kosovo, an outline (Table of Contents) of the assessment report and a brief workplan (tasks) for the assignments will be submitted to and discussed with USAID.
- 2) There is to be a briefing at the half-way point of the assessment, with debrief on findings and recommendations before leaving Kosovo.
- 3) A draft of the final report will be submitted to the Mission for review before the team leaves Kosovo. The Mission will respond with comments within 10 working days. The contractor will submit the final report within 10 working days thereafter. The final report should contain an executive summary and should clearly identify the team's findings, conclusions, and alternative policy options. Appendices should, at a minimum, list the people and organizations interviewed. The report should be well-written and concise, not repetitive or unnecessarily wordy.

The Evaluation Team reports to USAID:

Flora Arifi, KAP/SFS-CTO USAID/Kosovo; and

Michael Martin, Private Enterprise Officer, USAID/Kosovo.

Appendix 8.2. Work Plan

STAGE I. INITIAL REVIEW AND INTERVIEWS (Week 1)

Task

- Conduct review meetings with SCF and their partners, and identify parameters relevant to the SOW.
- Identify key informants in various projects involving technology diffusion and arrange initial interviews.
- Review project reports and other documents provided to the team.

Output

- draft of Table of Contents and Work Plan submitted Feb. 5th.

STAGE 2. SELECTED INTERVIEWS AND FIELD VISITS (Week 2 and part of Week 3)

Task

- Design interview format to collect pertinent information on critical issues.
- Nash and Sullivan split up and conduct interviews. Nash to focus on associations and their relevance to diffusion of technology. Sullivan to focus on public institutions and private companies.

Output

- Submit rough draft of report on Feb. 16th.
- Brief USAID and SCF on preliminary findings (February 18th, Wednesday, 10:30 am at USAID).

STAGE 3. REFINE ASSESSMENTS AND CRAFT RECOMMENDATIONS (Week 3 and Week 4)

Task

- Conduct final meetings with key informants and close gaps for the final report.

Output

- Submit final draft of the report by February 26th.
- Conduct final debriefing to USAID and SCF on Feb. 27th.

STAGE 4. REPLY TO USAID COMMENTS ON THE FINAL DRAFT

Task

- Incorporate comments from reviewers for final report.

Output

- Final report is completed.

APPENDIX 8.3. CONTACT LIST

- Feb.02, Mon Nash and Sullivan arrive and attend a briefing meeting with Paul McCartney and Jean Russell of SCF (ph. 044-128-274 or 044-162-420)
- Feb.03, Tue Briefing meeting with Mike Martin (ph. 038/243-673 ext.152), Flora Arifi (ph. 038/243-673 ext.143), and Dale Pheiffer (ph. 038/243-673) of USAID
- Feb.04, Wed Meeting with Kosovo Business Support (KBS(project personnel: Debra Wahlberg (038/243-361/62), Peter Dickrell (038/243-361/63), and Tom Easterling (038/243-361/62/63)
- Feb 04, Wed Meeting with IFDC project personnel: Raymon Clark (038/249-699), Mentor Thaci (038/249-699), and Beke Zahiti (038/222-435) of the Kosovo Feed for Poultry Project.
- Feb.04, Wed Meeting with CARE project personnel Dawn Wadlow (038/243-546 or 038/243-864) and Jill Crowther (038/222-435 or 038/243-546) of the Link COMPETES Project
- Feb.05, Thu. Meeting with Gail Cashin (044/177-210), Agim Rysha (044/121-271)and other staff of the International Rescue Committee
- Feb.05, Thu Meeting with Andrew Jones (ph. 044/363-487), team leader, and Roger Rice(ph. 044/399-529), Training Expert, of the Strengthening Advisory and Support Services Project funded by the European Agency for Reconstruction.
- Feb.06, Fri. Meeting with Ismet Isufi (ph. 044/128-708), Executive Director, Kosova Development Center (KDC) and Claudio Ramirez (ph. 044/334-643) of Canadian d'Etude et de Cooperation Internationale (CECI); and representatives from the Gjakove Municipal Assembly and Rahovec Municipal Assembly. Follow-on visit to the wholesale market in Prizren and then to managers of two farmer associations in "Anadrini" (ph. 044/134-272) and "Hortikultura".
- Feb.07, Sat Meeting with Xhyle Idrizaj (ph. 044/180-991), owner of a dairy operation in Shtime. Also made follow-up visits with two dairy farmers who supply milk to Ms. Idrizaj.
- Feb.09, Mon Meeting with Afrim Frrokaj (ph. 038/211-603) of the Rural Development Department and Idriz Gashi of the Sustainable Land Use and Land Protection Section in the Ministry of Agriculture, Forestry and Rural Development.
- Meeting with Agim Deshishku (ph. 038/249-137) , Manager of Xeni an importer and distributor of seed and fertilizers.

Meeting with Gary Moinette (ph. 038/226-400 or 038/226-401), Head of Retail Banking of Raiffeisen Bank on their credit programs for agriculture and agribusiness enterprises in Kosovo.

Feb.10, Tue. Meeting with David Black (ph. 038/248-938) of ABU banking institution on credit opportunities for agriculture.

Meeting with Mike Martin (ph. 038/243-673 ext.152) of USAID to discuss development of the report.

Meeting with Ragip Kastrati (ph. 044/175-279) of the Faculty of Agricultural in Animal Science at the University of Prishtinë.

Meeting with Fadil Musa (ph. 044/213-795) and Vjollca Jashanica of the Seed Project supported by FAO.

Feb.11,Wed Meeting with Hajrush Stublla (038/581-021), Director of Agricultural Professional School, and Feti Krasniqi (044/345-142), Chief of Agricultural Economy, at Ulpiana High School in Lipjan

Meeting with the store manager at Ardi Supermarket in Prishinë.

Meeting with Mufail Salihu, member of Kosovo Organization of Dealers of Agricultural Inputs, and owner of three outlet stores.

Feb.12,Thu. Travel with CARE project staff to Prizren for a series of meetings. Met Tush Nushi (ph. 044/191-228), Director of Municipality of Prizren. Meeting with directors of ABI and ABI-ELIF 19 (Afrim Arzuallxhiu (029/44-005) and Irfan Fusha (ph. 044/113-430)) of the dairy, vegetable and fruit processing company. Attended the seminar for farmers by CARE in Dragash Municipality on aspects of dairy management and agribusiness. Interviewed Ilir Binaku (ph. 044/144-572) of RTK television and farmers at the meetings.

Feb.13,Fri. Travel with the IRC staff to Peja to visit the farm of fruit growers of Hivzi and Safet Mgounjania who belong to an apple growers association. Meeting with staff (Dr. Sc. Nysret Taraku, Acting Director (ph. 039-31-635) of the Kosovo Institute of Agriculture (Peja Agricultural Institute) on their current and future programs. Visit the farm of Sadik Blakaj and other members of an apple growers association near Istog.

Meeting with Tomë Gjini of “Gjini – Tag” a maize producer. Ph. 044-187-815.

Meeting Muharrem Rushiti of the Association “Gruri” (wheat) in Ferizaj. Ph. 044-130-493.

- Feb.14,Sat. Meeting with Shefqet Dreshaj, director of “Teuta-Mi”, an integrated company of dairy production and a slaughter house. Ph. 044-138-577
- Meeting with maize producer and input dealer, Mustafë Hoxha, of Rahovec, ph. 044-200-823.
- Meeting with Pashk Gjokaj of “13 Qershori” of Trakaniq of Gjakovë, 044-130-493.
- Meeting with Franë Hasanaj, producer of different crops, vegetables, and maize ph. 044-145-994.
- Feb16,Mon Meeting with Robert Berlin(044/500-547), CTA, and Faton Nagavci (044/500-549), Co-Team Leader, at Inter-Cooperation, Swiss funded organization involved in horticulture sector.
- Meeting with Ilaz Selimi owner of “Dardania” a factory for seed processing in Klina, ph. 044-138-985.
- Feb.17,Tue Meeting with Bedri Kosumi, owner of Pestova Export – Import Company specializing in potato products located near Prishtina.
- Feb 18,Wed Meeting with Marian Cadogin (038/549-704) and Tendie of Mercy Corps. Attended seminar for members of the herb association at KBS office. Conducted mid-term debriefing with USAID management staff.
- Feb.19,Thu. AKA meeting with Imer Rusinovci, Mentor Thaçi, Qerim Ramadani, Fatmir Selimi (044/044/193-278), Sali Aliu (ph. 044/148-162), Muhamet Farizi (ph. 044/124-545), Prof. Muhamet Sadiku (Riinvest), Meeting with Nathaniel Thomson, Consultant, and Vahdet Anadolli (044/189-760), General Manager of Agency for Finance in Kosovo in Peja. Visit to a meat shop in Peja that received several loans from AfK.
- Feb.20,Fri. Meeting with CBDC Vjosa Mullatahiri (044/307-033) in Gjakova. Meeting with Shukri Lila (0390/ 30-025 or 30-081), owner and Muhamet Doblilara, Commercial Director, of Mozart Chocolate Company in Gjakova (ph. 390-30025). Meeting with Yuriy Shulhan (044/120-018), Country Director, FINCA (NBFi)in Prizren. Meeting with Enver Kokollari owner of E&S a company making construction items outside Prizren.
- Feb.21.Sat. Visit to farm input supply dealers in Skënderaj.
- Feb.23,Mon. Preparation of the draft report to USAID.

- Feb.24,Tue. Meeting with Frauke Jungbluth, David Lugg, and Rahib Karky of the World Bank agriculture team (ph. 044/120-041). Meeting with Ilir Pushka and Lutfi Jusufi of Vitta Alcon, sunflower processing plant in Ferizhi. Meeting with Valli Corbanese, ILO Advisor to the Regional Vocational Training Centers.
- Feb.25,Wed. Preparation for final debriefing with USAID staff.
- Feb.26,Thu. Meeting with Xhelal Radoniqi, Commercial Manager, and Burhan Gutiqi, Import Manager, of Devolli Company in Peje.
- Feb.27,Fri. Finalize the draft report.
- Feb.28,Sat. Departure.

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