

Promoting Institutional Development
in Higher Education and Research in Kosovo

HIGHERKOS



AgriEnvironment: Sustainable Agriculture in the Light of European Environment Targets

K-09-2012

***Nachhaltige Landwirtschaft unter Berücksichtigung
europäischer Umweltziele:
Internationale Forschungskooperation und -netzwerk
Österreich, Kosovo und Kroatien***

**REPORT ABOUT THE HIGHER KOS TRAININGS
IN AUSTRIA AND CROATIA**



HBLFA RAUMBERG - GUMPENSTEIN
LANDWIRTSCHAFT

MINISTERIUM
FÜR EIN
LEBENSWEERTES
ÖSTERREICH



One main objective of the international project was the organisation of two trainings for young researchers from Kosovo in Austria and Croatia, to show state of the art research activities, share experiences and best practise examples and to give support how to use the resources in their country.

1st HIGHER KOS Training, Austria 2013: Organic and Conventional Agriculture – Current Situation and Challenges for the Future

The first training was organised by the Agricultural Research and Education Centre Raumberg-Gumpenstein in Austria. It lasted from 26th until 31st May 2013. The project team from Croatia and Kosovo, a group of eight students from the University of Pristina, Faculty of Agriculture and Veterinary, Department of Agro-Economy as well as external experts participated at the training.

Main content of the first training

27th May 2013

- Current situation of sustainable agriculture in the project partner countries
- Production sectors, sustainable grassland management, strengths and weaknesses of ecological production, economically aspects, controlling systems, quality management
- Organic agriculture – National and EU-chances and problems
- Visit of a small local organic farm with special EU Slaughterhouse in Donnersbach

28th and 29th May 2013

- Participation at the International Conference of the INTERREG project BE-NATUR - Better Management of Natura 2000 Sites
- Agriculture, Nature Protection and Biodiversity in South-East European countries – strengths and weaknesses

30th May 2013

- Workshop and field trip to the Sölk Valley / Nature Park
- Traditional agriculture and alpine pasture management, chances and risks, alpine pastures, exhibition at the castle Großsölk, products, second income of farms

31st May 2013

- Education and Research Centre for Viticulture and Pomology Klosterneuburg
- Vine- and fruit production in sense of ecology and sustainability

Description of the first training

The project coordinator of Austria, Renate Mayer from the Agricultural Research and Education Center Raumberg-Gumpenstein, welcomed the students group from Kosovo and their expert Ekrem Gjokaj together with the experts and project partners from Croatia Marin Krapac, Kristina Brscic and Danijela Poljuha. An introduction into the project „Sustainable Agriculture in the light of European environmental targets” and organization details for visit followed.

Sustainable ecological agriculture in the project partner countries

On 27th May 2013, the project team from Kosovo, Croatia and Austria visited the Institute of Organic Agriculture and Farm Animal Biodiversity in Trautenfels. Dr Andreas Steinwider, Head of the institute, welcomed the participants. After a short introduction and presentation of the Agricultural Research and Education Center, of the background and content of the project and its activities, the participants got an overview about the actual situation of sustainable agriculture in the partner countries.

- Status quo of sustainable agriculture in Austria and Europe by Paul Axman
- Current situation of agriculture in Croatia by Marin Krapac
- Status quo of sustainable agriculture in Kosovo by Ekrem Gjokaj
- Production sectors, sustainable grassland management, strengths and weaknesses of ecological production, economic aspects, controlling systems and quality management by Andreas Steinwider, Waltraud Hein and Paul Axman

After the presentations, the group discussed about the current situation in their countries and challenges for the future. The actual research activities could be examined during an excursion through the research institutes, stables and processing centre of AREC. The Agricultural Research and Education Centre has a very good network of research and education with its technical college. The students from the technical college Raumberg-Gumpenstein have a special subject so called: "Production and Presentation" and many of their products (cheese and meat products) get prices for high quality and taste.

The participants of the training also visited the outdoor trials for sustainable crop management and low input cattle farming.

From theory to practice in the alpine area

During the afternoon the participants got the opportunity to visit the organic farm of Herbert Kreutzer. He constructed a special slaughter house for cattle without EU funds and sells veal by direct marketing. In winter time he has a second income as worker at the ski lift company in Tauplitz and is land manager of the Natura 2000 sites in Trautenfels (land owner = Styrian League of nature protection Province Styria). The farm is very small with steep hills and therefore hard to manage. Also the winter period can be very long and the vegetation period offers only two mowing times. The students discussed with Herbert Kreutzer about the problems, the way of organic production and the need of subsidies in rural areas far from infrastructure. Changes in funding systems and CAP is permanent a new challenge, also the controlling system, which is very bureaucracy.

Higher Kos Student's presentations

In the afternoon, the students from Kosovo presented their scientific posters to the participants of the training. The posters dealt with following focal points and were part of their studies (university exams):

- Laws and structures in general and for the future – options and requirements (Genta Kadriu and Lavdije Sopi)

- Infrastructure, logistic potential, access to technology (Egzon Bajrami and Nol Krasniqi)
- Sustainable Fields of livestock farming – agrarian production potentials on Kosovo in relation to climate and structural development (Vjosa Kida and Patjeme Doberdolani)
- Actual situation of agricultural production in Kosovo (Lert Osmani and Sokol Sallahu)

The students were divided into groups of two for their presentation. It was also a study exam for them. Ekrem Gjokaj evaluated the presentations in content, didactic and layout. For the students it was the first time to make this kind of open exam. After all presentations the group faced many questions according to the content. Also SWOT- analyses were part of the posters. The posters were also presented and discussed with the international participants of the BE-NATUR Conference on 28th of May.

After a guided tour through the conventional farming area of Raumberg-Gumpenstein and the other three Institutes (Institute of Livestock Research, Institute of Plant Production and Cultural Landscape, Institute of Animal Welfare and Animal Health), the students had the opportunity to watch the Movie “We feed the world” a documentary about food production in the world, especially the way of food production in the United States and the waste of food. The group discussed with other students and experts in a face to face atmosphere about gaps and prospects for implementation of sustainable and healthy production and life standards.

International BE-NATUR Conference

On 28th of May the students participated at an international conference of the Interreg South-East Europe project „BE-NATUR: Better management of Natura 2000 sites“. The conference focused on Land use management and Biodiversity: Nature Protection – Chance for Agriculture and Promotion of Rural Areas. Keynote speakers were representatives from the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, Natura 2000 site managers as well as representatives from the Styrian League of Nature Protection, Austrian Chamber of Agriculture and from municipality level. For most of the students it was the first time that they took part in an international conference. They could discuss and exchange experiences face to face with the different stakeholders.

Mowing of wetland areas – methods and efficiency to protect natural landscape

During a field trip, the conference participants could see a demonstration of cultivation methods of wetland areas and its effects for sustainable ecological land management (hand mowing, mowing with horse power and mowing with a small tractor).

A special visitor centre, which is used as science lab for kids and students (outdoor experience), was one of the highlights of the day. Young people can make experiments and research living organisms from small ponds with microscopes and determine plants as well as watch birds from a visitor tower made of wood. A special 3D-show from the National Park Gesäuse and a traditional dinner with regional products at the school Raumberg-Gumpenstein was the social event and conclusion of the day.

Interdisciplinary Workshop: “Agriculture, Nature Protection and Biodiversity in SEE countries – Strengths and Weaknesses”

On 29th of May the students were part of an interdisciplinary workshop. They had the possibility to discuss the topic of agriculture and nature protection and share ideas and knowledge with experts from different fields.

The participants discussed into groups about three topics:

1. Agriculture, nature protection and biodiversity in South-East European countries,
2. Know how transfer about nature protection and preservation of cultural landscape,
3. Guidance, support and public relation as part of Natura 2000 site management.

After the discussion in small groups, the workshop groups presented their results.

Following a field trip to the National Park Gesaeuse, dealing with "Ecological footprint and nature protection from the view of research and education" was organised.

Traditional Agriculture and Alpine Pasture Management

On 30th of May 2013 the participants of the first training went to the Sölk Valley, which is one of the most endangered areas in the district Liezen. The presentations focused on traditional agriculture and sustainable alpine pasture management. Very important for the Kosovo students was the presentation, held by the major of the municipality Kleinsölk, Karl Brandner. It was an honour for them to meet him and to discuss about his support for agriculture in his municipality, especially after the big catastrophe in winter 2010. Big avalanches destroyed the productive farm land, the main income for the local population. After a long restoration process of the areas, the farmers could start again with production of local specialities and the cultivation of pastures and the promotion of sustainable tourism. The Styrian inspector from the alpine pastures, Franz Bergler, explained the possibilities of sustainable management and second income of farmers. Tourism as second income plays a very important role in this small and endangered valley (catering with regional, traditional products in the small cabins). Albin Blaschka presented results from the INTERREG project Alpinet Gheep, the Leader project Ennstal Lamm and the research project AGRAM („Innovatives Almmanagement durch gezielte Beweidung mit Schafen zur nachhaltigen Bewirtschaftung der alpinen Kulturlandschaft“) as well as the Leader Projekt „Ennstal Lamm“. Sustainable alpine pasture management can play a very important role to generate synergies with tourism. After the discussions, a survey in the museum of the Castle showed the young people from Kosovo how to find a special brand for local farm products and how to promote them. The tasting of local, traditional products was the best way to show the possibilities to promote specialities with own brands. Besides holiday on farms, the network of local agricultural production for the valorisation and the knowledge of the alpine and rural areas play a very important role for small farms like in the Sölk valley.

Viticulture and Pomology at the Research and Education Centre Klosterneuburg

The last day of the study visit was on 31st May. The partners and the students visited the Federal Institute for Viticulture in Klosterneuburg, which is situated closely to Vienna. The team was welcomed by the director Karl Vogl and Franz Rosner made a short introduction and presentation of the Institute. Contents of the visit were:

- Overview of the wine- and fruit production in Austria in sense of ecology and sustainability; video about research activities and school
- Agriculture and ecology in Kosovo
- Ecological plant protection

After lunch, the group visited the Angeshof, the ecological wine production and the economy of winery. There is a special high tech wine testing center for promotion and quality control.

At the end of the stay in Austria, the students had time for a short trip through the city center of Vienna.



Figure 1: The first training took place at AREC Raumberg-Gumpenstein in Austria in May 2013.

2nd HIGHER KOS Training, Poreč 2013: Exchange of Experience in Science, Research and Networking – Challenges for future Jobs and Careers

The second training as part of the project "Sustainable Agriculture in the light of European environmental targets", in the framework of the Higher KOS project "Promoting Institutional Development in Higher Education and Research in Kosovo" was organized in Poreč, Croatia in October 2013. Host was the Institute of Agriculture and Tourism (IPTPO). A group of nine students from University of Pristina was part in this study visit as well as students and experts from the partner countries Croatia and Austria. The students from Kosovo were selected in a long term process by the Department of Agro-Economy, Faculty of Agriculture and Veterinary, University Pristina and Professor Mr Ekrem Gjokaj, who was supervisor of the Kosovo students during the training and also project manager from Kosovo. Most of the students also attended the first study visit in Austria in Mai 2013. The trainings were part of their further study exams.

Main content of the second training

24th October 2013

- Sustainable ecological agriculture in Austria – Best practices, future prospects
- Sustainable land use and rural development in Kosovo; Agriculture and economic strategies in Kosovo
- Agrarian research and Education in Istria/Croatia; Olive oil production in Croatia applying latest ecological tools
- Best practices on Agriculture development and education system
- Education and practice; From school to business – implementation of knowledge in agricultural business; Best practices on agricultural development and education
- Outdoor Excursion to the Institute of Agriculture, Tourism and Polytechnic: Field trials, education park-forest, polytechnic capacities
- Visit to a Family Agriculture Holding (farm with wine-cellar, new technologies, second income), discussion about agriculture as well as national and EU-problems

25th October 2013

- NEXT Conference "Partnership and Communication – A Key Element of Successful Research and Technology Transfer"
- Excursion to Ornithological Park Palud: "Connection between Nature Protection and Recreation, Know-how transfer about biodiversity and protected area management"

26th October 2013

- Study tour to Brijuni National Park: "History of human interventions to create a Nature 2000 site - nature protection and tourism – chance for regional added value"

Description of the second training and further prospects

The training started in the evening of 23rd October 2013. The students and the expert Ekrem Gjokaj were welcomed by Renate Mayer, project coordinator of the Agricultural Research and Educational Centre Raumberg-Gumpenstein (AREC) as well as by Barbara Sladonja,

Head of the Department of Agriculture and Nutrition in the Institute of Agriculture and Tourism in Poreč (IPTPO), and her colleagues.

As representative from the Federal Ministry of Agriculture, Forestry and Rural Development, Department for Economic Analyses and Agricultural Statistics, Ekrem Gjokaj is directly integrated in the agrarian development process of Kosovo.

During the evening programme the group shared their point of views for the training, gave feedback about their experiences from the first training in Austria and their expectations for the special training in Croatia. For the scientific preparation of the second training, the students from Kosovo worked in groups of two people for a period of time and prepared four scientific posters for the second training. The focus areas related to "Best practices on agriculture development and education system towards agriculture in Kosovo". Also new ideas for the production sector and opportunities for further jobs as well as gaps and prospects for future were presented and discussed during the study visit.

Kosovo is the newest country in Europe and therefore has to be established also in the agrarian sector. For young people, perspectives for innovative jobs should be developed. The agrarian sector is booming but needs know-ow from abroad. Networks in research and development are helpful to find out new strategies and best practice examples for economic vitality.

At the beginning of session one at the 24th of October, the students from Kosovo were welcomed by the director of the IPTPO, Dean Ban. He gave a short introduction and presentation of the institution and explained the work of the Institute, the structure and objectives in the field of agriculture.

The background and content of project and activities were presented by Renate Mayer (AR-EC) and Barbara Sladonja (IPTPO). After these presentations and introduction speeches, the students from Kosovo started to present their posters with following titles and contents:

- Education system in Kosovo, towards agriculture (Vjosa Kida and Pajtime Doberdolani): They described the actual situation in terms of education in the agricultural educational institutions of Kosovo and steps that need to be fulfilled in the future in order to have prepared human resources in Agriculture sector.
- Best practices in rural development, direct payments, grants (Leart Osmani and Sokol Sallahu): The students described the contributions of the Ministry of Agriculture, Forestry and Rural Development (MAFRD) to develop the agricultural sector by supporting the farmers with direct payments such as grants and subsidies, part of the Common Agriculture Policies.
- Local action groups in Kosovo (Egzon Bajrami and Nol Krasniqi): The students elaborated the definition of what is an LAG, current situation of LAGs in Kosovo, their focused investments and compared them with Leader approach LAGs in European Countries.
- Grape production and processing (Genta Kadriu, Lavdije Sopi and Festa Gjonbalaj): The topic focused on the current situation of grape production in Kosovo, table grape and wine production, also comparison tables of import and export with other countries. It is important to mention that SWOT analysis were also part of scientific posters presented by the students.

Student's opportunities for agricultural business – an exchange of experience

Ex-students from Polytechnic Rijeka Agriculture Department explained on bullet points the plans and overviews of their studies and their actual business. A discussion together with students from IPTPO about best practices on implementation of knowledge in agricultural business was very interesting and gave insight into the different point of views and practices in the countries.

Another discussion focused on the current situation in the three partner countries. The students compared their difficulties and challenges for the future. Experts gave inputs about priorities in EU policy and opportunities for farmers and employees. SME's like many farmers are, need a combination between tradition, innovation and quality of production. Impulses were given also to find networks for production and sale.

During the last event of the day at the Family Farm and Agriculture Holding the students and visitors got an overview about the adaption of newest technologies in a small company to implement EU standards. The students had a lot of questions mainly focused on the way of production. A tasting of specialities showed the manifold opportunities how to generate second income with quality products as a small company.

Communication networks for research and technology transfer

On 25th October the students had the opportunity to be part of the NEXT Conference in Pula. The topic was „Partnership and communication – A key element of successful research and technology transfer“. The conference started with the welcome and an introduction by the director of IDA and the Head of Research Centre Metris. After the introduction, the students got informed about different topics related to research and technology transfers as well as about networking as a key element of innovation and technology transfer. The following discussion directly with the conference members and experts was a great opportunity for the students to make new contacts.

Afterwards the technology incubator of Metris was visited. The high tech equipment in order to prepare special experiments as well as the introduction of the results of testing of materials illustrated the economic and scientific potentials of the incubator and the institute.

A panel discussion about the examples of successful knowledge and research transfer in practice of the three partner countries completed the conference programme. Panellists were discussing examples from their countries related to successful knowledge transfer. Austria and Kosovo shared examples connected to best practices in rural development. Meanwhile Barbara Sladonja from Croatia took an example of a successful study on olive oil products. This study established a device that it is used to identify the best time for harvesting olives from the trees. It was used in the framework of the studies in the Institute of Agriculture and Tourism (IPTPO). This device will help the farmers to harvest olives in the time of best quality. In the future it could be used especially in the region of Istria. The students actively participated in the panel discussions. Some introduced themselves, shared experiences and discussed the motivation to study agriculture. They also explained their future plans in the agrarian sector.

Nature protection and tourism – chance for regional added value

On 26th October the team of the second training participated in the excursion to Brijuni National Park, which is a Natura 2000 site and famous because of the history. Its characteristic vegetation makes Brijuni even more valuable in relation to other areas of this climate. On Veliki Brijun an extraordinary unity of natural elements and anthropogenesis has been achieved. By taking up the farmlands and by clearing the forests and transforming them into landscape parks with vast meadows, a unique landscape on the Croatian Adriatic Coast has been created. The majority of the flora on the archipelago of Brijuni has typical Mediterranean characteristics.

The students experienced a lot of examples and lessons about tourism in Croatia. These lessons learned, especially during the last day of the study tour, could impart impressions and ideas for the development of tourism in Kosovo as well. Kosovo has great potentials in this sector. The landscape is manifold with a high ratio of areas close to nature. Especially rural tourism could be an innovative branch for the future.

Summary

The impressions from the students showed the importance that this training had for them. The study visit was a great chance for all participants to learn and see some of the basic things in development of European Union countries, especially Croatia that joined EU lately. It helped a lot to understand the issues that Croatia is facing now in agricultural development, their examples, their mistakes and their best practices. Learning from the experiences about sustainable ecological agriculture, best practice examples, future prospects, Istrian experience of agriculture development in protected areas and others was a great opportunity for the participants of the training.

Most of the students from Kosovo were also part in the first study visit in Austria in Mai 2013. The know-how of both trainings should help them for their future professional career building. The students are optimistic that in near future some of the ideas which they obtained during the trainings will be implemented in Kosovo too. It is important to mention that the Kosovo students are from a developing country. Kosovo is the youngest state in Europe and in the future hopefully also part of European Union. So by having educated and prepared human resources, by training young researchers, they will fasten this process and join EU with the standards that are required. The group was formed among the best students that the Department of Agro-Economy has and they tried the best to represent their country in the best way possible. Everyone from the student's group will use those lessons to raise their capacities, especially in development of agriculture. For the students it was a great opportunity to be involved in this project and a special experience as start up for further cooperation.

For the future, the hosts AREC and IPTPO wish to have the opportunity to offer students from developing countries scientific and technical practice to get a broad few of innovation and state of the art know-how transfer in sustainable land management and to enhance the actual scientific network for young researchers and practitioners.



Figure 2: The second training was implemented in Poreč, Croatia in October 2013. Host was the Institute of Agriculture and Tourism (IPTPO).

Poster

Following posters were prepared by the students for the Higher KOS trainings.

Law & Structures in general and for the future

Gentë Kadriu & Lavdije Sopi

University of Pristina, Faculty of Agriculture and Veterinary

INTRODUCTION

Through this presentation we aim to summarize the agricultural laws adopted so far in Kosovo, in order to analyze the factors which have influenced the development of sustainable agriculture in Kosovo.

First of all we would like to give some information about our juridical system. History covers the period after the war ended in 1999 until the declaration of Kosovo's independence. Since then, there are four periods:

1. A period when UNMIK established juridical emergency system (June-December 1999)
2. The juridical system period under the Administrative Temporary Common Structures (January 2000-May 2001)
3. The juridical system period under CONSTITUTIONAL FRAMEWORK FOR SELF-GOVERNANCE OF KOSOVO (May 2001-February 2008)
4. Period of juridical system within Republic of Kosovo's Constitution.

One of the main challenges of Kosovo after the war has been the establishment of democratic institutions led by the rules and law.

KEY WORDS: Sustainable Agriculture, rural development, legislation, implementation.

KOSOVO IN FIGURES

Kosovo is the youngest country in Europe.

- It's located in the south-eastern Europe, in the center of western Balkan.
- Land area: 10,900 km²
- Population is about 1.8 million (165 inhabitants per km²)
- 27.2% of population is under 14 years, 66.1% is between 15-64 years, less than 6.5% of population is over 65 years old
- 2/3 of population live in rural areas
- More than 60 % of unemployed are rural people
- 53% of Kosovo's total land area is agricultural land and 41% forests.
- Agriculture contributes in GDP to 13%.

As we saw above Kosovo is mostly a rural country, so agricultural development has a very important role in the economic growth of Kosovo. One of the main factor in this case is the legislation and its implementation.

The term **legislation** means the totality of the legal acts of a state, dealing with a particular area of social activity such as criminal law, civil law, agricultural law etc..

The term **law** it is a norm or rule established by the highest organ of state and which is mandatory to be implemented by all state authorities and all citizens.

Agricultural law is a total of laws which have been approved to ensure the continued, efficient production and distribution of foods and fibers. Agriculture law legal issues include soil preparation, seed planting, crops, crop harvesting, gardening, horticulture, viticulture, apiculture (bee-raising), dairying, poultry, pest control and pesticides, and ranching in a commercial setting, as well as land use, use of natural resources, and environmental rules.

AGRICULTURAL LAWS

Some of the most important agriculture laws approved by the Government of Kosovo are: Law for agriculture land protection, law for regulation of agriculture land, law for irrigation of agriculture land, law for pesticides, law for forests, law for farming, law for agriculture and rural development, law for antidumping and countervailing measures, law for advising services in agriculture and rural development, law for food, law for inspection, law for organic agriculture.

ANTIDUMPING LAW

This law establishes the legal basis for the imposition of anti-dumping measures or with respect to an imported good that has been exported to the customs territory of Kosovo at a price that is below its normal value, if the importation of such good into the customs territory of the Republic of Kosovo is causing material damages to the concerned Kosovo's Industry.

Here is a case of appliance of the antidumping law in Kosovo. The case had to do with a local chicken meat processing company "Konsoni" and "Cosmonte foods" distributing company. Cosmonte Foods imported chicken meat from Slovenia and distributed it here with a lower price than in the origin country. This situation caused a decline in sales of Konsoni's product. As a result of that its owner wanted to find some dumping evidences, in order to submit the case to the Ministry of Trade and Industry (Evaluation Commission). He personally went to Slovenia and brought recipes of the same product. The price was higher than in Kosovo, and when he showed it to the Commission, they started to investigate the case. After the investigation was done, the Ministry took the decision to set anti-dumping measures for the product mentioned above.

Graph 1. Procedure of processing and approval of laws – Ratification

Photo 1. Geographical position of Kosovo

Table 2. Number of hectares with different cultures in 2012

Crops	Cereal	Vegetables	Fodder crops	Fruits	Industrial&Medical
Area Ha	135,923.00	14,247.00	93,326.00	4,819.00	780.00

Table 3. Number of livestock in Kosovo in 2012

Livestock	Cattle	Pigs	Sheeps	Goats	Poultry	Beehives
Number	314,323.00	55,775.00	110,754.00	12,118.00	2,318,037.00	46,483.00

CONCLUSION

As a result of approval and implementation of the agriculture laws last years in Kosovo and some other factors too, agriculture had an evident development. After the war Kosovo couldn't fulfill even 1 % of local demand for food and agriculture products. During this period agriculture sector had a big progress. Now the local demand is fulfilled up to 60 % by local agriculture products and food. The sector that had the biggest development is the sector of fruit and vegetables, vineyards, farming and poultry. But still there is a lot of work to do. In the future we are hoping to cultivate and produce more until the local demand is fulfilled at least 90 % from vendor farms.

REFERENCES

- INTERNATIONAL REPORTS
- SCIENTIFIC LITERATURE
- KOSOVO'S AGRICULTURE LAWS
- REPORTS OF MINISTRY OF AGRICULTURE

Table 1. Chicken prices before and after antidumping measures

Chicken meat prices	Price in Kosovo	Price in Slovenia	Difference	Price after measures
Euro/Kg	1.57	4.55	2.98	2.85

Graph 1. Chicken prices before and after antidumping measures

REFERENCES

- INTERNATIONAL REPORTS
- SCIENTIFIC LITERATURE
- KOSOVO'S AGRICULTURE LAWS
- REPORTS OF MINISTRY OF AGRICULTURE

GRAPE PRODUCTION AND PROCESSING

Gentë Kadriu, Lavdije Sopi, Festë Gjonbalaj

University of Pristina, Faculty of Agriculture and Veterinary

INTRODUCTION

Through this presentation we aim to present the current situation of grape production and processing in Kosovo. Kosovo has a long tradition of it. Vineyards first traces were found in an ancient soldier grave, where grape and wine glass were engraved. Grape cultivation decreased during the Ottoman empire invasion. During the 20th century lots of efforts were made to revive this sector, and as a result of those attempts, in 1953 the first wine cellar was built in Rahovec, which is also known as a place of grape. Rahovec is an agrarian municipality in the southwestern part of our country. Viticulture is a very important sector of agriculture with a great potential for foreign investors attraction. This is due to the continental climate, 300-400 meters above the sea level and more than 200 sunny days per year. These are the perfect conditions for viticulture that Kosovo has. That is why wine is one of the most well known products of Kosovo.

KEY WORDS: Grape, wine, production, processing

OBJECTIVES AND METHODOLOGY

Objectives of this research were to find:

- Total area with vineyards and selected by varieties
- Consumption, export and import of wine in Kosovo.
- Main problems of wine exportation
- Marketing and sales channels

This research lasted three weeks, in August. In this research were included 104 farmers, who were randomly selected from a total of 660 farmers.

WINE PRODUCTION IN KOSOVO

Kosovo's Government approved the Law for Viticulture and founded Viticulture Institution in 2007 to stimulate grape cultivation and wine processing with new technologies and techniques. Wine industry in Kosovo, currently has 4000 ha cultivated with grape, 80% of them is grape for processing and 20% table grape. Average yield per hectare is 8.5 ton. Actual production is supposed to be 25.000 tons of grape or 15 millions liters of wine.

The most cultivated table grape varieties are:

- Muscat Hamburg, an early ripened variety, followed by
- Muscat Italian and
- Cardinal

The most cultivated processing grape varieties are:

- Riesling of Rajna
- Riesling of Italia
- Chardonnay
- Merlot
- Vranac
- Game
- Pinot Noir.

Currently in the Republic of Kosovo there are 15 operating companies licensed by MAFRD which deal with grape processing and other products from grape and wine. Also there are 33 other operating companies in the Republic of Kosovo which are importing wine and other products of grape and wine. The biggest one is Stone Castle, which has 513 ha active vineyards. It also buys grape from small farmers. It has 257 permanent workers and 700 during the harvest season. Despite those licensed cellars, there are lots of non-registered cellars who sell their homemade wines and alcohol without a specific brand in the local markets and restaurants.

CONSUMPTION, EXPORT AND IMPORT OF WINE

With only two million inhabitants and approximately 60 percent of them are unemployed, wine remains a luxury that just a few can afford. Kosovo has the smallest wine consumption rate in the region, with only 4.25 liters per person. Therefore, only six biggest wineries produce four times more wine than Kosovo's population consumes. With such a small local market, the future of wine industry largely depends on exports.

The average annual exports of 4.5 million liters surpassed imports of 0.95 million liters. However 2.5 million euro were paid for imports and only 1.7 million Euros were received from exports. The difference in price is due to the fact that Kosovo mainly exports low quality wines and imports bottled quality wine. Imported wines, with an average price of € 2.68 per liter, the price is seven times higher than Kosovo prices of exported products, which cost only € 0.38 per liter.

Kosovo imports wine from more than 20 countries all over the world. From 2005 the price of imported wine was raised 55%, therefore the amount of money spent on imports was also increased.

Table 1. Production, export and import of grapes and wine (t) 2010-2012

	Grapes			Wine		
	2010	2011	2012	2010	2011	2012
Export	203	7,87	6,28	2	5	5
Import	2.251	1.996	903	119	93	412
Production	28.578	16.584	29.539	3.255	1.521	5.221

Table 2. Kosovo's wine exports

Country	% of exports in Kosovo
Serbia	57 %
Germany	35 %
Austria	4 %
Croatia	2 %
Macedonia	1 %
Jamaica	1 %
Ireland	<1 %
Albania	<1 %

Table 3. Kosovo's wine imports

Country	% of imported wine
Montenegro	62 %
Italia	11 %
Macedonia	10 %
Slovenia	5 %
Serbia	4 %
Spain	3 %
France	1 %
Bulgaria	1 %
Croatia	1 %
Switzerland	1 %
Australia	1 %
Mexico	<1 %
Austria	<1 %
Nederland	<1 %

THE MAIN PROBLEMS OF WINE EXPORTATION OF KOSOVO

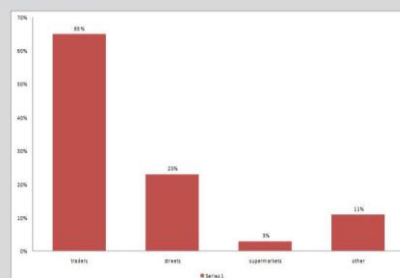
Kosovo has to respect all of EU rules if it wants to enter in the EU markets. Kosovo's authorities are responsible for internal regulation of wine sector in order to be able to export it. There are three main problems:

- **LABELING-** wine labels should contain all the information about the origin country, nominal volume, percentage of alcohol, name of the importer, quality etc. if the functioning of the internal mechanism of Kosovo improves, this won't be a problem anymore.
- **PRODUCTION CONTROLLING SYSTEM-** Kosovo doesn't have a Wine institute that is accepted by the EU.
- **LACK OF EFFICIENCY IN DOCUMENTATION PROCEDURES-** most of the documents are obtained easily. However, wine producers face difficulties in getting these following documentation: wine certificate and laboratory analysis accepted internationally, EUR1 origin certificate and L03 sanitary certificate.

MARKETING SALE CHANNELS

Based on this study done we have interviewed farmers about the market channels that they use. The results have shown that the table grape is sold mostly in the main streets of the region. 65% of the grape production is distributed to the other places of Kosovo.

Graph 1. Sales channels



REFERENCES

- www.ardp-kosovo.eu
- www.ksweb.org
- REPORTS OF MINISTRY OF AGRICULTURE



Education system in Kosovo, towards agriculture

Vjosa Kida & Pajtime Doberdolani

Faculty of Agriculture and Veterinary/Department of Agroecology
University of Prishtina, 10000 Kosovo



Introduction

Education system in Kosovo consists of three levels of regular education. The system includes:

- Elementary school 1-9 years
- Middle school 10-13 years
- University 3-4 years (5 years medicine)

Part of the University of Prishtina "Hasan Prishtina" is Faculty of Agriculture and Veterinary.

Although we have a system that includes most of the people in the formal education, the agriculture sectors faces a lack of well educated people towards development and innovations in this sector.

A better approach for the formal high school and university education for agriculture human resources is necessary in order to have a sustainable agriculture in the future.

University

The system of agricultural education at university level is organized in two levels of studies;

- BSc level
- MSc. level

The duration of the studies is 3+2, three years lasts BSc level plus 2 years lasts the MSc level of studies. The profile of studies are divided into; horticulture (including fruits, grape/vine, plant production and protection, agro - economics and veterinary.

The number of the students registered in the academic year 2011/12 in all the profile of studies is 485, the highest number of the students registered is in agriculture economics (175), followed by biotechnology and livestock (109), veterinary (97), field crops and vegetable (59), plant protection (39) and fruits and vinery (21). Out of this number of students, more than 24% were females (117) and 76% males (368).

Agricultural school system

The current system of **agricultural education in Kosovo** is organised in two levels:

- **secondary schools** (agriculture vocational schools),
- **university** (faculty of agriculture and veterinary).

Secondary schools: There are six secondary agricultural schools all over Kosovo with a total number of 3002 regular students. The duration of secondary school education is 2 + 1 + 1 (after 9 year of compulsory education), divided into 3 levels defined by International Standard for Qualification (ISCED) in accordance with applicable laws in the country.

The following agriculture secondary schools (ASS) are operating and were contacted:

1. ASS "Arberia" in Gijlan, with 1154 regular students
2. ASS "Zenel Hajdini" in Ferizaj, with 1126 regular students
3. ASS "Abdyj Frasheri" in Prishtina, with 664 regular students
4. ASS "Latif Berisha" in Vushtrri, with 305 regular students
5. ASS "Ali Hadri" in Peja, with 224 regular students
6. ASS "Adem Gilavica" in Lipjan, with 206 regular students

The number of registered students in the school year 2011/12 is 965 (Ferizaj 387, Gijlan 282, Prishtina 180, Vushtrria 111, Peja 93, and Lipjani 31). Out of this number of students, more than 26% were females (255) and 74% males (710). The profiles are more or less the same for all the secondary schools, although the number of the students per profile differs from ASS to ASS. The profiles are as follows:

- Agroecology,
- Horticulture,
- Plant protection,
- Food technology,
- Field crops,
- Livestock, and
- Veterinary

The highest number of the students per profile is in horticulture, followed by food technology and plant protection.

Level of education

The effects of the pre-war and after-war educational situation (closed schools, "house-school system) are still evident in Kosovo's society. During a period of about 10 years the educational system was not working properly.

The data have not changed significantly between the 2006 and 2008 survey. The general tendency of lower education of the female agricultural population with a (significantly higher share of non-education and lower share on secondary and university education) has not changed. Therefore, the (equal) education in the agricultural sector **remains an important issue** in Kosovo's Rural Development.

Practice

Most of the agricultural high schools have their own orchards and farms where they do practical hours, while the faculties of agriculture that are in (Prishtina, Mitrovic) they also have didactic faculty farms but they do practice at the private farms as well.

PREFERENCES

- Kosovo Agricultural Opportunities Strategy (Prishtina, Kosovo 2010) – USAID Kosovo
- ARDP Kosovo
- Agriculture and Rural Development Plan 2009- 13



Local Action Groups in Kosovo

Egzon Bajrami & Nol Krasniqi

Faculty of Agriculture and Veterinary, Department of Agroecconomics

INTRODUCTION

Local Action Groups (LAGs) are made up of public and private partners from the rural territory, and must include representatives from different socio-economic sectors. They receive financial assistance to implement local development strategies, by awarding grants to local projects.

here are a total of 893 LAGs selected under the Leader⁺ Community initiative among the 15 Member States of the European Union before its enlargement in 2004.

The Local Action groups in Kosovo were established during the period from 2007-2009

Ministry of Agriculture, Forestry and Rural Development established LAG's within the project with European Commission.

They were formed according to LEADER approach.

They have the Local Development Strategy that includes a project basket of projects that need to be implemented.

THE CURRENT SITUATION OF LAG's in KOSOVO

Among 30 LAG's in Kosovo, not all of them are active.

The only funds directly supporting LAGs are national funds of MAFRD. However, there are no financial means allocated to cover running costs (office, transport). As a result, LAGs rely on voluntary commitment of board members. But they are **not the project financing institution or project implementers**.

LAGs have to apply for funds like other NGOs, as there is no separate budget line for projects suggested by LAGs.

Two municipalities have an "Rural Development Coordinator" (RDC) and their role is equivalent to the LAG-manager.

Most of the LAGs in Kosovo have a lack of regional cooperation for joint projects.

Lack of the establishment of LAGs in the municipalities mostly inhabited by serbians.

From the understanding of many stakeholders the LAGs are not so much an instrument of decision-making and networking –what they should be- but an operational unit for implementing or even financing of projects

STRUCTURE AND ROLE OF KOSOVO'S LAG

- President
- Secretary (1st vice president)
- Treasurer (2nd vice president)
- The General Assembly members 24-30 members
- Members of the board from 8-12 people
- Board members 50% Public / 50% Private

Different NGO's are represented in the board.

LAGs are potential drivers of rural economic development on the local level. The foreseen role of a LAG is to identify and select regional needs and projects. This should be made clear to all relevant stakeholders. The foreseen role of LAGs is in more detail:

- LAGs support strategic and participatory planning processes on local and regional level
- LAGs facilitate cooperation between private and public sector on a regular basis
- LAGs facilitate cooperation between different sectors of economy and their representatives within one region
- LAGs give advice to local beneficiaries and thus improve their access to funding opportunities
- LAGs support innovations in rural areas by making use of networks, information spread within networks and connecting regional stakeholders and resources
- LAGs cooperate with other drivers of local and regional economic development (RDAs on regional level, departments of municipalities on local level)
- LAGs take over functions in cross-border cooperation.

EU Members States LAGs

Main funding sources are the EU-program LEADER⁺ and national as well as private sources (co-financing).

Each LAG has a **LAG-manager** (or LEADER-manager).

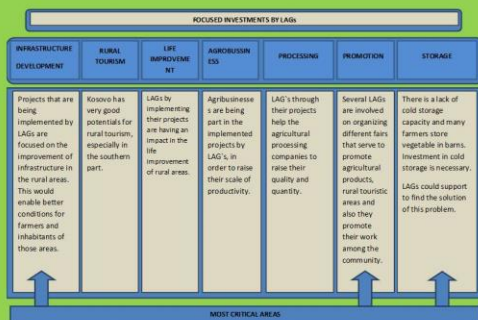
A LAG defines its own region according to the territorial approach which is demanded by the LEADER⁺-program. As the territory borders are chosen in terms of regionally shared potentials LAGs usually cover more than one municipality. This characteristic fosters inter-municipal cooperation.

LAGs build up local **public-private partnerships**. They aggregate and combine available human and financial resources from the public sector, the private sector, the civil and voluntary sector

LAGs are an instrument of **decision-making and networking**.

Functions of LAGs:

- Inter-municipal or regional cooperation
- Broad involvement of the private sector
- Coordination of different stakeholders (public and private)
- Facilitation of participatory local or regional planning processes
- Support to project development and implementation



SWOT Analyses	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • The opportunity for cooperation among MAFRD, municipality farmers to meet their and need and fulfill their requests. • Improving systems for better circulation of information between institutions and private rural stakeholders. • Promotion of innovations in technology, education and advisory services • Designing and implementing training programmes • 55.6 % of the agricultural population under 30 years of age • Diverse willingness for supporting LAG's and modern initiatives • Increased awareness among farmers on the standards of food quality and safety and the need to improve competition. • Study tours and presentation of best practice examples by farmers in Kosovo, neighboring countries or EU countries. • Willingness of people in rural areas to participate on volunteer work in cooperation with LAGs 	<ul style="list-style-type: none"> • Hesitation of municipalities to cooperate accept innovations - Domination of traditional methods in agriculture • Decision-makers not considering as a function of LAGs • Hesitation of private sector to be active in LAGs • Lack of stimulation for LAG members by MAFRD. • Functions are not defined clearly and properly. • Difficulties in spreading information for farmers (Not a good access for farmers to information) • Lack of practical training and demonstrations; • Lack of support logistics for implementing projects (Vehicles, laptops, projectors, demonstration equipment etc. • Insufficient no. of experts in certain fields. Mainly on rural diversification and agro-environment • Improper organization of farmers in associations and cooperatives • Lack of updated project baskets • Lack of interested people to be active in the volunteer work when projects are implemented
OPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Raising the capacities of the farmers • Rural tourism development • Unused potential of existing land (production of no/3 three products) • Investments for grants (especially in agriculture mechanization) • Presentation and promotion of new products. • Improvement of infrastructures. • Agricultural Bank. • Investments on lowering the cost of production • Agricultural land management • Increased green areas • Education in schools on agriculture issues • Finding donors for investments in rural areas; 	<ul style="list-style-type: none"> • Lack of payment for the LAG members • Volunteer work will not last long of modern production • Unwillingness of people to work without any interest • Relatively not well educated people in agricultural sector • Increased level of NGOs that are implementing agriculture projects • Loss of interest among the youth about agriculture; • Decision making competences are not given to LAG by municipalities;



Construction of a new cow shed according to MAFRD criteria (Best Practice)

REFERENCES

- Kosovo Agricultural Opportunities Strategy (Prishtina, Kosovo 2010) – USAID Kosovo
- ARDP Kosovo
- The Kosovo Greenbook (strategy for sustainable agricultural & rural development in Kosovo)
- Agriculture and Rural Development Plan 2009- 13
- Technology and its contribution to pro-poor agricultural development – DFID
- <http://ec.europa.eu/agriculture/rur/leaderplus>



**University “Hasan Prishtina” – Faculty of Agriculture and Veterinary
Department of Agroecology**

**Best practices in rural development
(direct payments, grants)**

Students: Leart Osmani & Sokol Sallahu

SUMMARY

This poster intended to analyze the current situation of rural development in Kosovo, what is the main policy of rural development in Kosovo and the trade policy

Taking into account the fact that 60% of the population live in the rural areas and are often under-employed, the strategy of agricultural and rural development is aiming income generation activities and a diversification of crops towards more value added products able to supply a greater part of domestic consumption demand. Also, the strategy addresses regional and EU market opportunities and developing the food chain from farm to table.

The overall mission of the Ministry of Agriculture, Forestry and Rural Development is to facilitate structural changes in the rural economy and to establish the economic framework and mechanisms to support job creation and income generation through improvements in agriculture and rural development and rural diversification in Kosovo.

Semi-subsistence family farming will remain the main target for the mid-term, though a longer term strategy might assume transformation towards a larger size farms.

Raising labour productivity closer to EU levels is likely to be achieved only on livestock farms in the foreseeable future.

Food quality and food safety will be ensured through sustainable land use, environmentally sound farming and rural development practices.

INTRODUCTION

The Republic of Kosovo is a new born country (independent since 17th of February 2008), characterised with the lower economic development in Europe, and with the highest rate of unemployment (around 40%, of which 60% are under 30 years old).

According to the Ministry of Agriculture, Forestry and Rural Development (MAFRD) sources, the share of agriculture in total GDP is 12 % of, and it absorbs 30 % of employees, while agricultural products in total export account for 15 %.

Taking into account the fact that 60% of the population live in the rural areas and are often under-employed, the strategy is both an agricultural one and a rural development one, aiming at income generation activities and a diversification of crops towards more value added products able to cover a greater part of domestic consumption demand.

The overall mission of the Ministry of Agriculture, Forestry and Rural Development is to facilitate structural changes in the rural economy and to establish the economic framework and mechanisms to support employment creation and income generation through improvement of agriculture and rural development in Kosovo.

One of the main issues in economic development is the role of private businesses and its reaction towards opportunities that reallocate resources towards more productive activities. The fiscal policy, through increases in public expenditures or through decreases in fiscal charges, can directly influence directly enterprises' performance, aggregate supply and demand, employment and a sustainable macro-economic environment.

Targets of ARDP 2007-2013

Table 31 Targets of the ARDP 2007-2013

Indicator	Unit	2004 Base	2006	2013 ¹	Source (2004/6)
Competitiveness and efficiency					
Commercial bank loans for agriculture	% of total loans	2.0	4.0	12.5	BPC
Irrigated area	% of arable land	5.1	8.5	20	EU MAFRD
Average small farm size	ha	1.6	1.5	1	AHS:2004/2005
Average large farm size	ha	15.0	19.3	30	AHS, SO MAFRD
Dairy cow in large farm	heads/large farm	4.4	5.45	20	AHS
Productivity					
Wheat grain	t/ha	3.8	3.9	5	AHS
Potato	t/ha	23.1	23.0	35	AHS
Number of tractors >40HP	units	19,258	25,236	30,000	AHS
Quality of main agricultural produce					
Milk grade A (dairy processing plant VITA)	% raw milk sold	30	50	100	KAMP
Rural society					
Agricultural population, Secondary school completed	%	34.4	34.1	75	AHS
Agricultural population (age group 10-49)	% of total	24.1	24.1	50	AHS

Indicative financial plan versus payments

Axes	2007-2013	2007-2011	2007-2013	2007-2011	spent / planned
	planned	spent	planned	spent	
	Mio. €		share of axis %		%
Competitiveness (M1,2,3,4)	109.96	16.03	65	92	14.6
Agri Environment (M5)	12.00	1.28	7	7	10.7
Quality of Life (M6,7)	30.45	0.00	18	0	0.0
Local Development (M8)	16.07	0.20	10	1	1.3
Total RD	168.48	17.52	100	100	10.4
Direct payments					
				14.21	
Total RD+DP (incl. donor funds)					31.73

POTENTIALS AND CLIMATE

Agriculture has a great potential of development in Kosovo and the creation of new jobs. It is evaluated that Kosovo has 577,000 ha of agricultural land, from which 28,000 ha are sown with forages, 78,000 ha are sown with maize that is mainly used for animal feed, 180,000 ha are hilly/mountain pasturages and 97,000 ha are plain pasturages.

This sector manages to absorb a significant number of the working power as a whole, especially the work power in rural areas. This is a good example of training youth and farmers. Agricultural economy is an important segment of economic activity in Kosovo.

Agriculture has great potential for the economic development of Kosovo. More than half of Kosovo's surface is arable land, favorable climate and opportunities to generate employment / income for a large number of families. Traditionally vegetable sector is better organized and more developed than that of trees. Small private entities managed by families dominate in both sectors. Except that for sale in the market in processed fruit and vegetables ajvar, pickles.

December and January are considered the coldest months, July and August as the warmest months of the year. It can be stated that the Kosovo territory is characterised by a sunny climate with variable temperature and humidity conditions.

THE MOST IMPORTANT AGRICULTURAL PRODUCTS IN KOSOVO

Kosovo has a good basis for the development of the fruit and vegetable sector. This segment is enriched with many options ranging from climate and natural resources to production cost and low incomes compared with region.

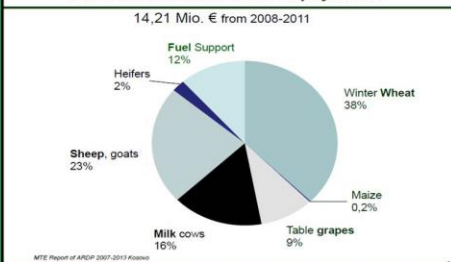
Also, their presence and export opportunities in the region and in the new member states of the European Union (EU). Market effects can be achieved by raising awareness and informing producers about the requirements for varieties, shapes, scale, size and packaging of products that are in compliance with EU requirements in order to provide insight into such markets. Chuang has sufficient land for expansion of production and good technical knowledge of production methods.

However, in order to increase agricultural production, which will result in job opportunities and higher incomes, farmers, associations, groups farmers and companies sector.

MATERIAL

- THE KOSOVO GREENBOOK
- A STRATEGY FOR SUSTAINABLE AGRICULTURAL AND RURAL DEVELOPMENT IN KOSOVO 2010 - 2013
- Project: Vegetable Chain - Solution for chain competition vegetable processing in south-western Kosovo.
- ANALYSIS OF MARKET FOR VEGETABLES PRODUCTS PROCESSED IN THE COUNTRY

Allocation of funds: Direct payments



DP - applications and beneficiaries, 2008-2011

Product, in years	applications			amount paid in €
	submitted	paid	for	
Winter wheat, 2009-2011	25,995	13,509	55,636 ha	5,327,967
Maize 2009		81	100 ha	28,000
Table grapes 2010-2011		4,799	2,439 ha	1,338,064
Milk cows 2009-2011	10,013	9,085	77,024 head	2,252,252
Sheep & goat 2009-2011	4,726	4,268	391,742 head	3,296,375
Heifers 2008-2009	1,044	961	5,818 head	326,880
Fuel support 2008-2011			5,110 combines	1,642,281
Total DP	41,778	32,703		14,213,819



Infrastructure, logistic potentials, access to technology

Egzon Bajrami & Nol Krasniqi

Faculty of Agriculture and Veterinary, Department of Agro economics

INTRODUCTION

Kosovo's agriculture is characterized by small farm size, low productivity and absence of advisory services. It contributes approximately 12% of Kosovo's GDP, provides between 25% to 35% of all employment, mostly in the informal sector, and accounts for 8.3% of the value of total exports. The sector's contribution to GDP/share of employment ratio indicates that the efficiency of the Kosovo agricultural sector is low. Kosovo is a big importer of grocery products from the EU countries.

This difference between import and export of agricultural products with EU countries and regional countries is influenced by the war damages, especially in the machines and livestock losses. Agriculture of our country lost traditional export markets, also suffered considerable damages in the rural infrastructure. As a result, there was a drastic fall in agriculture production after the conflict, worsened by the lack of investment.

Convenient development environment (in recent years we have a policy reform - livestock farming) and factors of production, which owns the land, Kosovo can provide a competitive advantage in the production of certain animal products (milk, cheese, sausage, etc.) and a self-sufficiency for these products, only that required an upgrade and rational use of these factors. What is sought by farmers, is to produce products with lower cost and improve quality, which are the core elements of competitiveness.

INFRASTRUCTURE OF KOSOVO AGRICULTURE

The main problems in agricultural infrastructure of Kosovo:

- Lack of warehouses for storage of fruit (products)
- Old Technology
- Lack of capacity for storage of farm manure
- Lack of collection centers
- Outdated agricultural mechanization

Develop physical infrastructure in the following areas, in order of importance :

- Adequate Lab. Facilities
- Collection center for inputs
- High capacity freezing facilities
- Cool room facilities
- Cool truck transportation

The existence of an appropriate infrastructure can be considered as one of the most important factors for rural development in Kosovo. It serves many purposes, such as improving living conditions, providing access to markets, improving agricultural production and attracting investment.

THE ROLE OF TECHNOLOGY IN AGRICULTURE

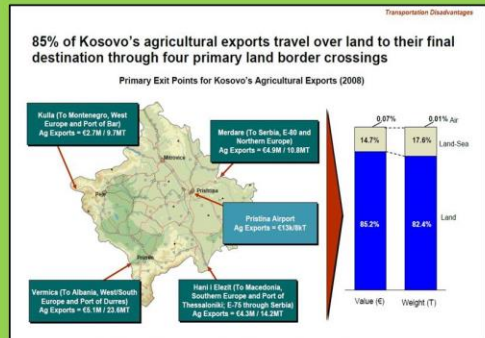
For years, scientific and technological advancements have benefited farmers in the industrialized world by driving agriculture production. However, smallholder farmers who are responsible for 80 percent of the food in the developing world have yet to see similar gains. These farmers, the majority of whom are women, lack access to many of the tools needed to be successful, such as modern irrigation practices, crop management products, fertilizers, postharvest loss solutions, improved seeds, mobile technology, as well as access to information and extension services.

Greater investment in and broader adoption of science and technology can enable the world to meet the growing demand for food as the population increases by

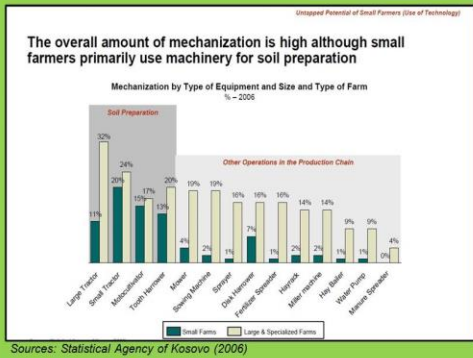
- Improved livelihoods of farmers and their families by producing more and higher quality crops for a growing population;
- Enhanced nutritional value and safety of food to improve the health and wellbeing of people around the world; and
- Agriculture sustainability through reduced resource use.

We must imminently work to meet global food demand through science-based innovation that reaches farmers, particularly smallholder farmers, around the world.

From improved seeds, to modern crop protection solutions, to mobile technology for farmers in the fields, to making foods fresher, safer, and healthier along the food chain, the agricultural and food system of the future can be more productive, more sustainable, more efficient, and more interconnected.



Sources: Kosovo Customs, Interviews with Transport Companies
Note: The five border crossings pictured represented 94.25% of agricultural exports in 2008



Sources: Statistical Agency of Kosovo (2006)

NEEDED INVESTMENTS FOR SMALL HOLDERS						
INFRASTRUCTURE DEVELOPMENT	SOIL PREPARATION	PLANTING	HARVESTING	POST-HARVESTING	PACKAGING	STORAGE
Additional greenhouse investment would allow smallholders to produce crops earlier in the season when high prices can be obtained. Small - scale "blast irrigation" systems are also needed.	High mechanization on for cereals. Low in vegetable crops. Horticulture is primarily manual. Some mechanization on exerts for planting of peppers (Las Palmes). As long as labor costs are low, this is not a bottleneck.	Planting cereals is highly mechanized, but horticulture is primarily manual. Mechanization on exerts for planting of peppers (Las Palmes). As long as labor costs are low, this is not a bottleneck.	Harvesting is primarily manual and because of the low cost of labor, will continue as such. Increased mechanization is not economical.	Although there is some need for additional converters and equipment for sorting (e.g. for apples), mechanization is not a bottleneck. Manual sorting on tables is sufficient.	For several processors bottling, packaging and sterilization is a production bottleneck which affects the volume they are able to buy from smallholders.	There is a lack of cold storage capacity and many farmers store vegetable in barns. Investment in cold storage is necessary.
↑ MOST CRITICAL AREAS ↑						



SWOT Analyses	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • The opportunity for cooperation among farmers in the process of the food chain (input, production, processing, marketing) • Improving systems for better circulation of automation between institutions and private rural stakeholders • Promotion of innovations in technology, education and advisory services • Designing training programs for using the new technology • 55.6 % of the agricultural population under 30 years of age • Donors willingness for supporting advisory services and modern mechanization • Increased awareness among farmers on the standards of food quality and safety and the need to improve competition • Free advisory services for farmers • Study tours and presentation of best practice examples by farmers in Kosovo, neighboring countries or EU countries. We could stimulate the modernization of agriculture production, presentation of diversification activities etc. • Willingness of people in rural areas to participate on water sanitation, water treatment, improving roads and sidewalks. 	<ul style="list-style-type: none"> • Hesitation of farmers to accept innovations - Domination of traditional methods in agriculture • Decision-makers not considering agriculture as a priority • Migration of youth/ professional people towards urban areas • Risk of farmers' perceiving advisory services as useless • Lack of stimulation of the processing industry • Unfair competition from the imports • Incomplete data on agricultural production • Lack of water for irrigation and unsafe sources • Outdated machinery and technical equipment combined with a resistance of farmers to apply new techniques and lack of professional capacity on farm management are main obstacles for an adequate farm development • Difficulties in spreading information for farmers (Not a good access for farmers to information) • Lack of practical training and demonstrations • Lack of support logistics for advisory services (Vehicles, laptops, projectors, demonstration, a equipment etc.) • Inefficient use of experts in certain fields. Mainly on rural diversification and agro-environment • Improper organization of farmers in associations and cooperatives • Poor land management, poor water management • Waste water and other waste flow into rivers • Degradation of riverbeds when extracting gravel • Lack of construction plans in rural areas • Lack of collection points for agricultural products (milk collection centers, refrigerators)
OPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Fixing the irrigation system. • Unused potential of existing land (production of two/three crops) • Investments for grants (especially in agriculture mechanization) • Presentation and promotion of new products • Improvement of infrastructure • Agricultural Bank • Investments on lowering the cost of production • Agricultural land management • Increased green areas • Education in schools on agriculture issues • Finding donors for investments in rural areas. • Special training for the women farmers. • Use of existing water sources 	<ul style="list-style-type: none"> • Lack of education to use the new technology • Lack of education to use new ways of modern production • Unwillingness of farmers to accept new ways of production • Relatively not well educated agricultural population • Abuse of agricultural land • Increased migration from remote rural areas • Only old people remaining in rural areas • Increased level of informal employment • Loss of interest among the youth about agriculture • Reduction of agriculture areas from illegal constructions



REFERENCES

- Kosovo Agricultural Opportunities Strategy (Prishtina, Kosovo 2010) - USAID Kosovo
- ARGP Kosovo
- The Kosovo Greenbook (Strategy for sustainable agricultural and rural development in Kosovo)
- Agriculture and Rural Development Plan 2009-13
- Factbook Kosovo, Ministry of Trade and Industry
- Technology and its contribution to pro-poor agricultural development - DFID
- Managing Authority, State of play, experience, problems, next steps - EREM GJOKAJ

**University "Hasan Prishtina" – Faculty of Agriculture and Veterinary
Department of Agroecology**

Actual situation of agricultural production in Kosovo

Students: Leart Osmani & Sokol Sallahu

SUMMARY

This poster intended to analyze the current situation of agricultural production in Kosovo what are the most important agricultural products in Kosovo in relation to climate and structural development and what are the potentials for the future.

Taking into account the fact that 60% of the population live in the rural areas and are often under-employed, the strategy of agricultural and rural development is aiming income generation activities and a diversification of crops towards more value added products able to supply a greater part of domestic consumption demand. Also, the strategy addresses regional and EU market opportunities and developing the food chain from farm to table.

The overall mission of the Ministry of Agriculture, Forestry and Rural Development is to facilitate structural changes in the rural economy and to establish the economic framework and mechanisms to support job creation and income generation through improvements in agriculture and rural development and rural diversification in Kosovo.

Two thirds of the population of Kosovo lives in rural areas and most of these work on small family farms. As is the case to a certain degree with most countries, but arguably more so in Kosovo, agriculture and the wider rural economy are much more than an economic sector. Traditional and social values are major considerations and affect many of the policies and strategies put forward here.

Semi subsistence family farming will remain the main target for the mid-term, though a longer term strategy might assume transformation towards a larger size farms.

Raising labour productivity closer to EU levels is likely to be achieved only on livestock farms in the foreseeable future.

Food quality and food safety will be ensured through sustainable land use, environmentally sound farming and rural development practices.

THE MOST IMPORTANT AGRICULTURAL PRODUCTS IN KOSOVO

Kosovo has a good basis for the development of the fruit and vegetable sector. This segment is enriched with many options ranging from climate and natural resources to production cost and low incomes compared with region. Also, their presence and export opportunities in the region and in the new member states of the European Union (EU).

Market effects can be achieved by raising awareness and informing producers about the requirements for varieties, shapes, scale, size and packaging of products that are in compliance with EU requirements in order to provide insight into such markets. Chang has sufficient land for expansion of production and good technical knowledge of production methods. However, in order to increase agricultural production, which will result in job opportunities and higher incomes, farmers, associations, groups farmers and companies sector.



CONCLUSIONS AND RECOMMENDATIONS

- There is a need for more structured institutional intervention for main products of vegetables and fruits that have potential for export, such as peppers, tomatoes, potatoes, onions and cabbage and strawberries from trees.
- Empowerment and the sustainability of Market Information System in order to help this system to become more efficient and effective in providing data for price movements and their impact on the internal market and external Kosovo and surrounding states.
- Scaling the size and packaging of the products right in line with European requirements.
- Stimulation and expansion of greenhouse space, offering products to market all year round.
- Awareness raising campaign for consumers to buy larger mass local production of vegetables and fruits. To become part of the message "It's yours" in a broader dimension.

INTRODUCTION

The Republic of Kosovo is a new born country (independent since 17th of February 2008), characterised with the lower economic development in Europe, and with the highest rate of unemployment (around 40%, of which 60% are under 30 years old).

According to the Ministry of Agriculture, Forestry and Rural Development (MAFRD) sources, the share of agriculture in total GDP is 12% of, and it absorbs 30% of employees, while agricultural products in total export account for 15%.

Main agricultural sectors are: livestock (the fund of animals is of 291,400 cattle) crops (300,000 ha cultivated with crops, while 160,000 ha are pastures) agroprocessing industry, milk processing industry (381,500 t/year) and dairy products. Kosovo agriculture mainly is based on small scale farming, also it is present a subsistent and semi-subsistent farming, characterised with a low productivity and low margins as well. However, agriculture remains one of main sectors for job creation and absorbs a considerable number of job-sickers.

Since 1999 after suffering for decades and suppression and terror, and after experiencing lots of damages and destruction during the war in 1999, Kosovo has been unprepared to start with an economic concept-open market. Thus, it has experienced several shocks in Kosovo's economy, including agriculture, did face with very harsh and unfair competition, either from neighbour countries or wider, which did hinder the agricultural development.

To adapt to the new post-war economic concept the Government of Kosovo has done reforms in fiscal policy, which result in liberalization of the local market and later with some fiscal subsidies and financial support for this sector.

Kosovo has adopted the Agricultural and Rural Development Plan 2007-2013 in compliance with the European Commission policy, that is Common Agricultural Policy, which is implemented by the Ministry of Forestry and Rural Development. And the new plan for the period 2014-2020 is in a phase of drafting, and it is expected to be adopted by the end of this year.

POTENTIALS AND CLIMATE

Agriculture has a great potential of development in Kosovo and the creation of new jobs. It is evaluated that Kosovo has 577,000 ha of agricultural land, from which 28,000 ha are sown with forages, 78,000 ha are sown with maize that is mainly used for animal feed, 180,000 ha are hilly/mountain pastures and 97,000 ha are plain pastures.

This sector manages to absorb a significant number of the working power as a whole, especially the work power in rural areas. This is a good example of training youth and farmers.

Agricultural economy is an important segment of economic activity in Kosovo. Agriculture has great potential for the economic development of Kosovo. More than half of Kosovo's surface is arable land, favorable climate and opportunities to generate employment/income for a large number of families. Traditionally vegetable sector is better organized and more developed than that of trees.

Small private entities managed by families dominate in both sectors. Except that for sale in the market in processed fruit and vegetables (apples, pickles). Agricultural potential for the economic development of Kosovo is not used enough.

Local production of vegetables and fruits does not cover the demand of the local market, as crucial although there are favorable conditions. Therefore, Kosovo imports almost 60% of vegetables and 40% of the trees from the Balkans. On the other hand, low export Kosovo in two cases of production of vegetables and fruit compared with these countries. Products that have potential for export are: peppers, tomatoes, potatoes, onions, cabbage and strawberries.

The climate of Kosovo is largely continental, resulting in warm summers and cold winters with Mediterranean and Alpine influences (the average temperature ranges from +30 °C (in summer) and -10 °C (in winter)). However, due to unequal downs in some parts of the country, there are differences in temperature and rainfall distribution.

December and January are considered the coldest months. July and August as the warmest months of the year. The maximum rainfall rate is reached between October and December. Between November and March, snowfall can be expected in Kosovo, even in the flat parts of the country. The highest snowfall rates can be expected in the mountain regions of Kosovo.

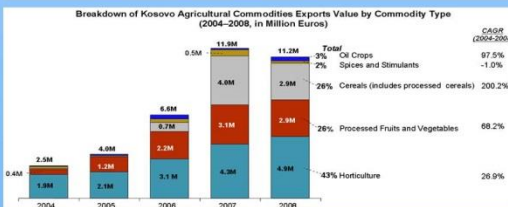
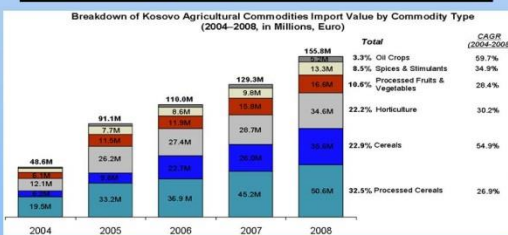
Based on the climate conditions, Kosovo can be separated into three climatic areas:

- Climatic Area of Kosovo (region of Kosovo),
- Climatic Area of Dukagjini (region of Dukagjini) and
- Climatic Area of mountains and forest parts.

Finally, it can be stated that the Kosovo territory is characterised by a sunny climate with variable temperature and humidity conditions.

MATERIAL:

THE KOSOVO GREENBOOK
A STRATEGY FOR SUSTAINABLE AGRICULTURAL AND RURAL DEVELOPMENT IN KOSOVO 2010-2013
Project: Vegetable Chain - Solution for chain competition vegetable processing in south-western Kosovo
ANALYSIS OF MARKET FOR VEGETABLES PRODUCTS PROCESSED IN THE COUNTRY



SWOT ANALYSIS:

- STRENGTHS:**
- Land Quality (good land quality)
 - Training and Expertise
 - High % of full time farmers
 - Age profile is positive
 - Climate - favourable - allows diverse enterprise mix
 - Tourism potential
 - Well maintained - high reinvestment into farms
 - High ownership of land
 - Good Co-operation structure
 - Milk Production Capacity
- WEAKNESSES:**
- Decrease in Margins - Price Pressure
 - Labour shortage + price of labour (can't compete)
 - Limit on output (high cost)
 - (Urban pressures) infrastructure and development projects
 - Movement out of farming - farm accession
 - Cost of administration and monitoring - products can only carry so much cost
 - Negative Quality image - Consumer -Social - Press
 - Loss of bargaining power
 - Lack of branding - trust
 - Product Suitability
 - Need higher quality
 - Lack of diversity
 - Lack of confidence by consumer in products
 - Lack of value added products
 - People feel that food should be cheap
 - Farmers have no control over prices
 - Loss of connection between farmer and customer

- OPPORTUNITIES:**
- New enterprise development (eg mushrooms)
 - Better marketing initiatives (eg mushrooms)
 - Cheap cost - marketing + presentation
 - Education and promotion (image)
 - More valued products - trend for more processed foods
 - Market 'environmentally friendly food' - much of fresh food already is - under REPS?
 - Positive media campaign
 - Direct marketing to final consumer - new technology (web sites) = space for sales
- THREATS:**
- Health scares + negative media
 - Imports
 - Health and safety
 - EU enlargement
 - Climate
 - Infrastructure - new motorways - fragmentation, isolation, increase in non viable farms, social aspects, equal benefits
 - Infrastructure - access to farms on county roads
 - Supermarkets
 - Concentrated buying power



Sustainable fields of livestock farming (what are, what can be the agrarian production potentials in Kosovo), in relation to climate and structural development

VJOSA KIDA & PAJTIME DOBERDOLANI

Faculty of Agriculture and Veterinary/
University of Prishtina 'Bill Clinton'
10000 Kosovo



Summary

What are?

Generally livestock production is seen as a backbone of Kosovo's agriculture, considered as an activity with considerable social and economical importance. Further more the livestock sector is the most demanding sector in terms of costs of meeting the new hygienic, environmental, animal welfare and food safety standards.

According to MAFRD data it is estimated that in Kosovo are over 83,000 livestock farms, most of them are small size, mainly subsistent and semi subsistent farms. Typical farm feature is a high level of land fragmentation. Livestock products constitute a main source of food. The small livestock farms have poor hygienic and zoo-technical conditions. Commercial farms and some of the semi commercial farms have more advanced breeding condition.

According to MAFRD data, the largest part of the livestock sector is cattle production (approx. 59%), followed by small ruminant livestock sector (goats and sheep) with 28%. Poultry and pig production have less share. Other livestock sub-sectors in Kosovo are aquaculture and bee keeping.

Kosovo has sufficient capacities for animal slaughtering. According to MAFRD data there are 37 licensed slaughterhouses.

In general, the meat industry has the required technology, mainly for producing salami and proscute. The technological side is very well.

Methodology of working

The Agricultural Sector Evaluation Report was elaborated under the EU Twinning project "Preparation for implementation and management of agricultural and rural development policy in Kosovo". The Sector Study Report is result of the joint work of Twinning experts in close cooperation with MAFRD staff. Within MAFRD, three working groups, established per sector, have prepared materials with all available data per sector.

Milk products

Cow milk

According to MAFRD data in Kosovo there are around 151 000 milking cows or 52% of the cattle fund. The predominant size of cow milk farms is 1-5 heads which comprise most cows in milk production (76%), 24% is comprised by farms that have over 5 heads of milking cows and only 5.3% is in farms over 10 cows. Farms with 5 and over 5 heads of milking cows are the main suppliers of the processing industry with raw milk. The country has 4,238 farms with 5 and more heads of milking cows, of which the farms with size between 5 and 10 cows represent approximately 92%.

Sheep milk

According to MAFRD data the total number of the farms above 30 heads is 1 081 of which the biggest share is to farms with a size between 50 and 100 (403), followed by the group of size between 100 and 200.

Goat milk

There are around 226 goat farms with a size above 20 heads, of which the biggest share is of the farms with a size between 20 – 50 heads.

Introduction

Provision of the feeding basis for livestock - according to expert estimations the feeding basis is insufficient and of poor quality which is reflected in the decline of genetic production potential and farmers' income. In the last years the quality control of concentrated feed is implemented and some investments are made on improving the farmers' knowledge in preparing food rations and promoting new technologies in animal feeding. However, animal feeding remains an important issue in the field of livestock production development and in food provision in general.

In Kosovo there are 23 food producers and processors of animal feed with technical capacities

Livestock breed structure is unfavorable to the high production breeds. There is also a lack of knowledge on the practices, equipment and machinery required for animal breeding in commercial farms.

In order to improve the breed and breeding conditions MAFRD has established a Mechanism for the implementation of development policies - The Kosovo Livestock Breeding Centre (KLBC).



SUPPLY BALANCE – Meat supply		2009
1. Production (carcass): 50%	kg/head	224.11
1.1 Live weight		448.23
2. Carcass weight per head according to categories		
2.1 old cows 43%	kg/head/slaught	192.74
2.2 female calves 49%	kg/head/slaught	219.63
2.3 male calves 53%	kg/head/slaught	237.56
3. Domestic production of carcass (carcass x No. of heads)	Ton	28,832.55
3.1 old cows	Ton	2,924.91
3.2 female calves	Ton	10,001.86
3.3 male calves + bulls	Ton	15,905.78
4. Imported meat (c.w.)	Ton	12,514
5. Live weight import c.w.	Ton	16,881
6. Supply (3+4+5)	Ton	58,177
6.1 Export	Ton	0
6.2 For domestic use (3+4+5-7)	Ton	58,177
7. Self-sufficiency	%	49.56
8. Meat on farm (70%)	Ton	20,182.78
9. Meat traded from farm 15%	Ton	4,324.88
10. Meat from (import)	Ton	29,395.00
Use (8+9+10)	Ton	53,902.66
11. PRICES		
11.1 Price of carcass weight	€/kg	3.50
12. VALUES		
12.1 Production (3 x 11.1)	€	100,913.95

Meat product

The beef industry is primarily a by-product of the dairy industry. Only several farms are focused on intensive fattening with a relatively low number of heads. 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 and also there is a significant amount of import (12,514 t. in 2009). According to MAFRD data there are 30 meat processors and 37 slaughterhouses, as well as many small meat shops.

Red meat, especially beef, is a popular product and offers opportunities for import substitution. In the case of increasing import prices, domestic production can become important.

Cattle

Cattle is the main meat production sector and the most demanded meat. 127,449 heads of cattle are slaughtered each year in Kosovo out of which 112,294 or 88% are calves and 15,155 or 12% are cows released from milk production. According to the MAFRD data, 28,832.55 tons of cattle meat is produced each year out of which 25,907.64 tons / year or 89.85% are veal.

Sheep and goats

Sheep production is mainly referred to lamb whilst meat production in other categories is relatively low and is of relatively low importance for farmers' income. Lambs slaughtered are 5 – 6 months old at 22-25 kgs. Annually, around 100,000 heads of lambs are slaughtered whilst the annual production of lamb meat is 1,200 tons.

Around 50-60% of the total quantity may be exported.

Meat processing and trade

Kosovo has sufficient capacities for animal slaughtering.

According to MAFRD data there are 37 licensed slaughterhouses. Slaughterhouses currently provide only public slaughtering services for the needs of butcheries. The level of use of technical capacities is very low. According to KFA during 2009 in industrial conditions (in licensed slaughterhouses) 35,000 heads of cattle were slaughtered including 6,321 heads from imports. Animal slaughtering according to the legislation and best hygienic practices is an important factor in the chain of food safety.

Currently, the meat industry processes products from imported meat. Only one of the factories produces cattle meat slices (alb. rrishtë gjedhi) and the pate (alb. pashteta) packaged in metallic conserves which is classified as a conserved meat dish. Capacities of the meat industry are sufficient for the processing of around 300 tons meat / day whilst the level of their use is around 20% of the installed capacity.

In general, the meat industry has the required technology, mainly for producing salami and proscute. The technological side is very well.

Types of Animals	Number of Animals
Cattle	321.624
Dairy of Cows	189.706
Pigs	39.591
Sheeps	151.813
Horses	6.152
Chickens	2.058.756
Bees	60.952

References

ISMAFRD (2009): FADN in Kosovo, http://www.ismafrd.org/Doc/FADN/FADN_in_Kosovo.pdf
MAFRD (2007): Marketing Support Project – 6th Quarterly Report
MAFRD and European Commission (Nov. 2006): ARDP Kosovo 2007-2013.
MAFRD (2009): Strategy for the horticulture sector 2009-2013



Mowing wet meadows with horses

Karin Hohegger¹⁾, Renate Mayer²⁾, Claudia Plank²⁾, Andreas Köberl²⁾

1) Natura 2000 Site Management Ausseerland, 2) HBLFA Raumberg-Gumpenstein



Nature conservation uses horse power Pilot intervention on protected areas

Wet meadows are extremely species-rich ecosystems. They are habitats for many rare and endangered species. With ongoing structural changes in agriculture, a great number of wet meadows are abandoned because they require a lot of manual work for their management. Therefore, today's challenge is the search for sustainable management practices that are not time-consuming and having the same ecological impact as manual work.

The use of horses with modern equipment for mowing was established for wetland management in Natura 2000 sites in Salzkammergut, Styria.



© HBLFA Raumberg-Gumpenstein, 2013

Mowing with horses – old and new approach

To establish mowing practices with horses, 10 different wet meadows were selected as trial plots. Some of them have not been managed for the last 30-50 years, some were only managed by manual work with a motor mower. Horses could be successfully used at most of the plots.

The project showed following results:

- Mowing with horses has low impact on wet soils
- Ecological benefits: minimal noise, no emissions, no fossil fuels, insects and birds can easily escape
- Use of workhorses supports small scale grassland farming.
- Pasture management with slopes up to 30% is possible
- Apart from mowing there are versatile uses of horses: Thinning of forests, clearing of bushes or dwarf shrubs, cultivation of potatoes, transport services



Mower with double knives
simple technology
cutter bar is 2,2 m long
three v-belts actuate the chain
very robust, does not plug up
best adapted for mowing
meadows with horses
costs: about 6.800 €

© Renate Mayer, 2013

Horse power has many regional benefits

- Maintaining high biodiversity of wet meadows
- Keeping cultural landscapes open, preventing forest and scrub encroachment
- Creating awareness for ecological sustainable landscape management practices
- Promoting new income possibilities for local farmers
- Apart from the use of horses in agriculture and forestry they can support a great variety of touristic services as coach and sledge driving, riding and transport
- Working with horses has positive effects on children, teenagers and people with mental problems

Perspectives

Regional farmers who still remember the use of work horses take a great interest in the project. They are surprised about the modern machinery partly imported from Germany and USA. Media and tourism show also great interest in the project idea. The multiple use of horse power is a new chance for sustainable ecological agriculture in rural areas.

Fact box

- LEADER-Region: Ausseerland, Styria
- Project Management: Naturschutzbund, Gebietsbetreuung
- Total cost: EUR 15.000.-
- LEADER-funding: EUR 7.500.-
- Project duration: 2014
- Contact details: karin.hohegger@gmx.at



International „Biodiversity & LEADER“ conference, April the 3rd, Vienna



lebendigeinteraktion.at

BeNatur

Better Management and Implementation of NATURA 2000 Areas

Mayer R.¹⁾, Plank B.¹⁾, Plank C.¹⁾, Bohner A.¹⁾, Hochegger K.²⁾, Zak D.³⁾, Köberl A.¹⁾



www.be-natur.it

Programme: INTERREG South-East Europe
Project duration: February 2011 until January 2014

Main objectives of the project

BE-NATUR project aims at **improving the transnational management of Natura 2000 sites** in South-East European counties. Facing the loss of biodiversity by defining common action plans and strategies to preserve the natural heritage and landscape with special focus on wet areas protected by the Fauna-Flora-Habitat- and Birds Directive.

- Improving the environmental quality and level of protection of targeted habitats and species (direct and indirect interventions),
- Strengthen the public-private cooperation,
- Influence policies of environment protection by adopting action plans at national level,
- Reduce gaps among the partner areas, regarding to the implementation of the EU-directive and knowledge of management practices (GAP analysis),
- Establish a good balance between social-economic development and environmental protection (awareness rising)

Project partners

Different institutions from Hungary, Greece, Italy, Bulgaria, Romania, Serbia and Austria work together. Lead partner is the Environment and Nature Conservation Association Nimfea. The Austrian partnership consists of the Technical University Vienna, the E.C.O. Institute for Technology and the Agricultural Research and Education Centre Raumberg-Gumpenstein.



Pilot projects of AREC

In cooperation with the Styrian League for Nature Protection and the Province Styria pilot projects were implemented in the Natura 2000 areas in the District of Liezen. The main focus is set on direct interventions (*sustainable land management with focus on protection of habitats and species, development of transnational action plans, scientific monitoring on sites*) and indirect interventions (*trainings for local experts and stakeholders, knowledge transfer, awareness rising, sensitization of the local population*). The involvement of municipalities and land owners is essential for the success of the project.

¹⁾ Agricultural Research and Education Centre Raumberg-Gumpenstein, Raumberg 38, A-8052 Ironing, renate.mayer@raumberg-gumpenstein.at
²⁾ Natura 2000 Gebietsbetreuung Auser Land, karl.hochegger@gmix.at
³⁾ University of Technology, Center of Public Finance and Infrastructure Policy, Vienna

