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BLUEBERRY MARKETING

KOSOVO CLUSTER AND BUSINESS SUPPORT PROJECT



July 30, 2007

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BLUEBERRY MARKETING

THE REPORT DESCRIBES TECHNICAL ASSISTANCE GIVEN TO GATHERERS, HANDLERS AND EXPORTERS OF KOSOVO'S WILD BLUEBERRIES KNOWN IN THE TRADE AS BILBERRIES, AND CLASSIFIED BOTANICALLY AS VACCINIUM MYRTILLUS. THE REPORT EXAMINES KOSOVO'S SIGNIFICANT OPPORTUNITIES FOR EXPORTING A PRODUCT WHICH IS IN HIGH DEMAND WORLD-WIDE.

Kosovo Cluster and Business Support project – Blueberry Marketing
Contract No. AFP-I-00-03-00030-00, TO #800

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PURPOSE OF ASSIGNMENT

Building on the success of the 2006 blueberry season, Consultant will provide selected blueberry handlers, processors and exporters with technical assistance and guidance in product post-harvest handling, packaging and marketing, including especially providing solid contacts with new international buyers. Additionally the Consultant will conduct training sessions and develop training materials to be used by KCBS staff, beneficiaries and local institutions in future trainings.

BACKGROUND

From 1989 to 2005 the business of collecting and exporting blueberries almost disappeared, with exports for 2005 estimated at only 50 tons. Prior to and during the 2006 blueberry season the KCBS Fruit & Vegetable Cluster made a major effort to resurrect the collection and export of blueberries from Kosovo. From May through July many wild forest areas in the area were visited to check blueberry plant populations and make yield estimates. Many of the important production regions are areas of Serb and Bosniac minority populations. KCBS worked to re-establish collection centers that would aggregate fruit from collectors.

In mid-July 2006 KCBS hosted a large meeting of the major parties interested in blueberry collection. The purpose was to introduce sellers and buyers to each other. Most of the sellers were operators of collection centers. The buyers were wholesale exporters, not processors. The meeting was notable for the presence of many representatives from minority areas. As a direct result the meeting, initial export contracts for 200 tons were made between sellers and buyers.

The results of this work were dramatic. In 2006 season exports exceeded 600 tons with a value of a million and a half Euros. Although some collectors were more active than others, about 900 – 1,200 people were involved in collecting blueberries, creating an estimated 120 – 150 full-time equivalent jobs. They were mainly young people and women, two groups that suffer from very high levels of unemployment. Acting solely as collection centers, about five associations or cooperatives were active, many of which are multi-ethnic. Blueberries were gathered by people living in 72 villages, mostly located in remote mountain areas. About 10 exporters participated, but some of them were also collection centers.

The 2006 blueberry season saw the resurrection of an industry that was vigorous in Kosovo before 1989. Alliances between collection centers and exporters were in flux throughout the season, forcing prices paid to collectors to rise and collected volumes to increase, and many new domestic value chain linkages were formed after such a long dormant period. Part of the catalyst for the success was a donation by KCBS of 200 hand-held harvesting rakes, which were distributed to 11 organizations throughout Kosovo.

EXECUTIVE SUMMARY

Kosovo contains one of the largest potential supplies of *Vaccinium Myrtillus*, or bilberry. This fruit is closely related its much larger cousin, the blueberry, though in Kosovo the generic word blueberry is universally used to describe the wild fruit with which this report is concerned. Throughout the report, the word bilberry is used for botanical accuracy.

The Consultant spent two weeks in the region working with KCBS staff to help connect the fledgling industry with the world trade of bilberries.

Currently, bilberries are gathered in remote mountainous regions of Kosovo, and are delivered to handlers who maintain temporary collection centers. Bilberries, are extremely perishable, and require immediate chilling, freeing or other preservation in order to avoid waste and degradation. In the past most bilberries have been rushed to Serbian packing facilities where they are tray frozen and sold at market price to customers throughout the world. These hasty cash transactions have left the Kosovo gathers and handlers at the mercy of packers further along the value chain and in no position to reject any price offered in the field.

Kosovo handlers/exporters are eager to take charge of their supply chain, and with the help of KCBS have implemented some of the necessary steps to enter the world market as direct suppliers of bilberries. This includes: sorting and calibration, case and tray freezing, as well as establishing and meeting market specifications and marketing.

To assist in this effort the Consultant:

- Met with most bilberry handlers (companies who receive blueberries and sell them further into the supply chain to exporters)
- Prepared and delivered a hands-on seminar attended by bilberry handlers and exporters which presented the best practices of bilberry production, handling packing and marketing
- Worked with KCBS staff to prepare materials, procedures and other information to assist the Kosovo exporters in initiating international commercial activity as well as providing advice on bilberry marketing

These activities have helped give the industry a better understanding of the global market for their product. Initial indicators show that this has already resulted in higher prices being received by exporters and, to meet demand, this has also resulted in higher prices paid to collectors compared with previous years. The exporters are now motivated to meet world product standards because they know it will result in higher prices. In future years, handlers at collection centers will invest and upgrade facilities to improve product quality, thereby commanding the best prices possible for their collectors.

FIELD ACTIVITIES TO ACHIEVE PURPOSES

The Consultant conducted three major field activities:

- Visits to handlers and exporters to assess the capacities to produce case-frozen bilberries acceptable to international buyers
- Implementation of a hands-on workshop for handlers and exporters to address topics related to improvement of Kosovo bilberry processing and marketing
- Production of materials to educate the Kosovo bilberry industry in producing product and selling in the world market.

TASK FINDINGS AND RECOMMENDATIONS

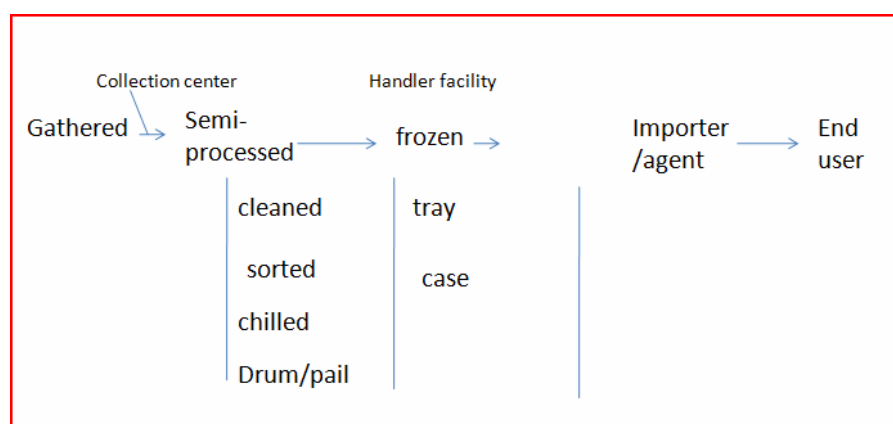
Task 1. Visit representative handlers/exporters to assess their capacities to produce case-frozen bilberries acceptable to international buyers.

Finding/Recommendation:

Visited ten different bilberry handlers and met with a number of suppliers of materials necessary for bilberry freezing and export including packaging and handling material companies potential contract freezers.

- Agroproduct Commerce, Podujeve
- Amkos Company, Podujeve
- Eurofruit, Mramor
- Besiana Company, Ferizaj
- Fungo FF, Kamenica
- Scardus Company and Qingjat e Sharrit Cooperative, Shtirpce
- As Promet, Leposavic
- Hit Flores, Dragash
- Junipery Fructus, Dragash
- Cooperative Rugova, met at KCBS office

Individual reports on meetings are found in ANNEX I.



The world trade of bilberries requires a product that is relatively clean, frozen solid and ready to ship via truck or ocean container to customers around the world. This requires several handler/exporter facilities and procedures that were not used in the past.

- **Gathering.** Bilberries grow wild – they can not be cultivated – in the mountainous regions of Kosovo, often in steep terrain. Gatherers are normally villagers who live in the region and are loosely associated with collection centers. These are often the same centers where the same collectors deliver other wild forest products such as mushrooms, juniper berries and medicinal and aromatic plants and herbs. The collectors work from dawn to dusk. Bilberries are a low, sprawling plant and grow only in very special environmental and topographic conditions. Collectors know exactly where the bilberries are located near their villages, and probably exert some form of oversight or territorial control of bilberry areas, similar to wild cashew gatherers in Africa. Some collectors have been fortunate enough to receive hand-held harvesting rakes from their handlers which were donated by the KCBS project. This has revolutionized picking speed and yields. Now, collectors without rakes are certainly going to seek request rakes from collection centers in the future. Collectors use their own containers for harvesting, which may be plastic bags, sacks, empty buckets, etc. They deliver the bilberries to a collection center or more commonly, a collection center operator drives to pre-appointed rendezvous point to accept the bilberries.

- **Reception and Field Purchasing.** Collection center operators weigh the berries and then pay cash to collectors on the spot. Prices fluctuate, but appear to be set by supply and demand. However, field prices paid to collectors in the Balkans seem to be reacting to the same market information. Yields this year are low due to an unusually warm winter and a very hot spring and summer. As a result, the low supply and high demand by end uses has ignited stiff competition for bilberries in the field. Prices are roughly doubled from last year and seem to be in line with prices paid to collectors in other parts of the Balkans. Collectors do not negotiate, but it is likely that the collection centers are keeping their prices paid on the high side to fend off outside spot buyers who have infiltrated the region to purchase scarce bilberries.



Top = non-cleaned ;
Bottom = cleaned billberries

- **Field Cleaning.** Bilberry plants tend to drop leaves rapidly when the fruit is ripening. Collectors, especially those using hand-held rakes, tend to deliver a lot of fruit with leaves and stems. In the bilberry industry this is totally expected and acceptable. But, somewhere later in the value chain an effort must be made to remove these leaves and stems from the fruit, and the earlier in the chain the better. Some collection centers are paying a 10 to 20 Eurocent bonus for berries that are field cleaned. One field cleaning method involves using a wet wool blanket on an inclined table, with the berries undergoing a gentle gravity tumble. However, field cleaning methods that include washing or extensive handling only serve to accelerate degradation of the bilberries. Best practices would recommend minimum cleaning by the collector, with a much higher level of cleaning performed using specially designed equipment which may be found either at the collection center or export facility. Cleaning is done before freezing.

- **Pre-cooling of Bilberries within a Short Period of Time after Reception at a Collection Center.** Unlike cultivated blueberries, bilberries retain freshness very poorly after harvest; they start to degrade immediately. This includes rotting, fermenting and softening of berries, which are negative quality attributes for buyers. Because collectors work from dawn to dusk to pick bilberries, they deliver them in the late evening or the following day to collection centers. If the collection centers lack any form of refrigerated storage, it is likely the bilberries will continue to remain at ambient air temperature, without respite from the forces of decomposition, until a truck takes them to an exporter. And, the truck may or may not be chilled. Another 4-5 hours may pass before the bilberries are frozen. This sequence of events, which has been typical to date in Kosovo, allows far too much time from harvesting to freezing. The temperature of the bilberries must be reduced to slightly above freezing as soon as possible after harvest. The first place to do this is at the collection centers. Currently only a few collection centers have refrigerated chambers to accomplish this. Investment in chilling and cold (not frozen) storage chambers is an important recommendation of this Consultant.
-
- Cooling chamber in Dragash
- **Transportation to Exporters.** After purchasing the bilberries from collectors they should be placed in plastic trays, the same type as those used for mushrooms. This is the same method used with red raspberries. After chilling, bilberries can be transported to handler/exporter facilities in Kosovo or beyond. These trucks should be refrigerated, and it is important that the berries are kept in chilled conditions from the time that they are chilled to the time they arrive at the packing facility. Lack of refrigerated transportation is often a weak link in the cold chain for bilberries. Care should be taken to minimize the transport time, to keep temperatures low and to place the berries in cold storage or freezing as soon as possible upon arrival.
 - **Sorting.** Freezing is an expensive yet necessary procedure, but it is beneficial to only freeze marketable fruit. Thus, it is necessary for the exporter or final handler to sort and clean the fruit to meet or exceed customer specifications. These specifications usually do not require perfectly clean fruit. Sorting methods can include air, manual sorting and machines designed specifically for cleaning blueberries/bilberries. In Kosovo we saw sorting being done after freezing; while this is not optimal, this is acceptable. Bilberries that have taken too long to reach this stage in the value chain process, and have become soft and juicy, are impossible to clean or sort unless they are frozen first.
 - **Freezing.** Case freezing is the standard for bilberry customers. This refers to freezing bilberries in boxes containing 10 – 13 kg of product. If the bilberries are in perfect condition, the handler should be able to place bilberries directly into a corrugated cardboard carton with a plastic liner and then place the carton in a freezer for 24 hrs (or more, depending on the facility) to produce case frozen bilberries. In Kosovo and Serbian bilberry are normally frozen on plastic trays before placing them into the cartons. This is done because the berries are often received in less-than-ideal condition, and if those conditions include wet or warm bilberries, attempts to freeze them directly in cardboard cartons will result in a solid block such that the bilberries can only be separated by first thawing the block. End users, food processors, prefer case frozen bilberries that can be shaken or rocked to some sort of free flowing state. However,

given the very high level of demand in the world market, block frozen bilberries will be accepted.

- **Packaging.** In a separate handout dimensions are provided for cardboard cartons that can be stacked on standard Euro pallets. Various sizes of cartons are common in Kosovo, many of which are too large, but the Consultant believes exporters will quickly shift to carton sizes requested by international buyers. Smaller cartons of proper strength can be stacked seven layers high on Euro pallets without crushing or bursting the seams.
- **Marketing.** Kosovo packers/exporters have been provided with enough information to price their bilberries in keeping with world prices and seek out international markets. This year the market price of bilberries is well above 3.50 €/kg and it is likely to surpass 4.00 €/kg. It is interesting to note that when calculating packing price and a profit margin that this year a handler can earn a profit when paying collectors 2.50 €/kg or more. Packers/exporters were provided procedures for making and receiving offers, shipping via freight forwarders, and communicating with buyers and potential buyers.

Recommendations:

All of the pieces of the puzzle for a new era of internationally connected bilberry industry are in place in Kosovo. At this time, no single enterprise has all of the pieces but they know they need to cooperate with those who have the missing pieces, the sorters, coolers, freezers and other components, in order to form a cohesive market and value chain. Kosovar participants in the bilberry industry are already moving beyond sales to companies in Serbia and are in contact with, and are receiving, inquiries for sales in distant markets such as China, Korea and Japan. As Kosovo companies begin to make business deals, or see their competitors make deals (made possibly by investments in equipment and facilities) they will move forward with more confidence which, in turn, will draw interested buyers from around the world.

Task 2. Conduct a hands-on workshop for handlers/exporters to address the following topics:

- Best post harvest handling methods
- International product specifications
- Issues related to case frozen bilberries
- Interior and exterior packaging requirements
- Contact list of reputable international buyers
- Best methods for sending product samples
- Use of intermediaries or freight forwarding agents with list of recommended companies

Kosovo Billberry Workshop

1. Background – to give understanding to be a better seller
2. The World Market
3. Production
4. Marketing/Market Development
5. The Future



Findings/Recommendations:

A seminar was held on July 12, 2007 in Pristina. This brought together most of the blueberry exporters and handlers in Kosovo which covered the above topics. The meeting was timed to coincide with the beginning of the bilberry harvest and the attendees certainly invested valuable time to attend this function. They were serious, intent on learning and seemed to focus on the marketing aspects of the presentation – see Annex II.

- Make this a yearly event in advance of the season. This will give the industry a chance to confer, strategize and confront mutual problems. It also provides a forum to “show and tell” about new advances in the industry, including new freezing facilities and sorting equipment.

Task 3. Provide training materials for the workshop discussed above to be used by bilberry exporters, KCBS staff and other interested parties.

A handbook was initiated and developed for the Kosovo Bilberry Exporters Seminar; it was designed to give the handlers the tools they need to enter the world bilberry market.

- Brief background on bilberries, so exporters can describe and present their product to the world market.
- International product specifications. We adopted specifications from the Japanese, which are internationally accepted. This included parameters for cleanliness, microbiology and other factors.
- Contact list. The number of bilberry importers and intermediaries is quite small. The exporters were provided with a list of contacts in the USA, Europe and especially Asia, the destination for most bilberries.
- List of intermediaries and freight agents. Shipping is normally the prevue of the buyer, but exporters were provided the names of the major companies that provide full-service freight forwarding for the frozen fruit industry.

Recommendation:

This is a very dynamic document which can and will change rapidly, especially the list of buyers. It will require periodic updating. The Consultant will continue to work with KCBS to finalize this handout - see Annex IV.

ECONOMIC RESULTS

This activity was conducted during the “ramping up” phase of the Kosovo bilberry harvesting season. As a result of activities by the KCBS project, a number of economic indicators were manifested early in the season.

- Price paid to gatherers. Confirmed reports from the field indicate collectors are receiving twice the price of last year. This is not only a result of an increase in world market prices, driven by consumer demand, but also because Kosovo exporters are now more closely linked to world markets and are not dependent on prices paid by Serbian intermediaries.
- Company investment and enthusiasm for bilberries. Because of interventions by the KCBS project, entrepreneurs are optimistic about the future of the bilberry industry. This has stimulated them to make investments which, together with focused development grants from KCBS, will create a more optimal and orderly market situation to Kosovo. As this occurs, collectors in villages as well as entrepreneurial bilberry collection center operators will benefit and continue to invest in their future.

CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE ACTIVITY

This year's harvest is off to a good start, but a lot of work remains to be done to thrust the Kosovo bilberry industry into the world market.

- Documentation of market size and characteristics.

Kosovo may well be the single largest source of bilberries in the world. Buyers want to know all about the potential volumes and about Kosovo to help them understand the product. A technical brochure on Kosovo bilberries should be developed which includes an analysis of anthocyanin levels and other pertinent information. This can be sent to potential buyers to provide background and knowledge necessary to evaluate Kosovo bilberries. It will stimulate their interest.

- Commercial Assistance.

Continue to assist exporters with the physical and information tools necessary to make things happen. Already we have talked to several exporters who are making contacts with buyers but need assistance to understand buyer terminologies, procedures and practices. This year, and in the future, foreign buyers will visit Kosovo. It will be helpful if they can be provided logistical assistance and guided to the exporters' facilities and growing regions.

- Fundamentals and Export Readiness.

Continue to encourage Kosovo entrepreneurs to build their businesses into "export ready" entities by strengthening their value chains from collectors to collection centers to freezing and packing facilities.

- Build a world presence for Kosovo Bilberries.

Kosovo exporters should begin to interact with the rest of the world blueberry/bilberry industry. Each year, there are several events where producers and buyers meet, including the International Symposium on Vaccinium Culture, which is held every several years and is sponsored by the International Society of Horticultural Science (www.ishs.org/calendar/index), and the AFFI Frozen Food Convention, which is held annually and is sponsored by the American Frozen Food Institute (www.affi.com). These events give the industry an opportunity to meet buyers, sellers and would provide an opportunity to place Kosovo on the buyers' maps for bilberries.




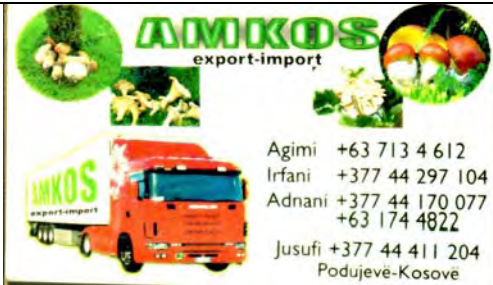
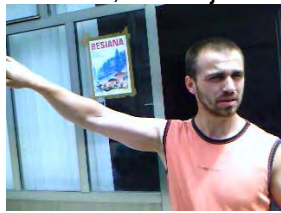



New freezing facility at As Promet, Leposavic

ANNEXES

Annex I	Meetings with Companies
Annex II	Exporters Seminar Presentation (PowerPoint)
Annex III	USAID Briefing – PowerPoint Presentation
Annex IV	Preparing Bilberries for Export



ANNEX I: Meetings with Companies

Company	Card	Discussion
<p>Agroprodukt Commerce,</p>  <p>Podujeve</p>		<p>This is the leader in Kosovo, with years of experience in producing top quality mushrooms. Has freezing capacity, also collection facilities. We discussed different freezing methods, quality specs and marketing and markets.</p>
<p>Amkos</p> 		<p>Small efficient little company, which has a position in collection of bilberries in Dragash. Company has big plans for freezing and export shipments. Already working with Italian partner who is buying stocks and also investing in equipment for freezing and storage.</p>
<p>Eurofruit, Mramor</p>		<p>Company has small freezing facility. Is currently freezing for the Serbian market. Product is unlearned and will certainly go to juice stock in Serbia. Went over export specs and quality aspects required by buyers.</p>
<p>Besiana, Ferizaj</p> 		<p>Very interesting little company that has small freezing capacity. Are selling frozen product to the Serbian market and want help with markets abroad. We went over potential customer names, ways to make contact and fulfillment.</p>

<p>Scardus, Shtrpce</p>  <p>New packing facility</p>		<p>Company is part of team of companies involved in new freezing plant. Under construction now. We discussed quality aspects of frozen blueberries, price trends and potential customers.</p>
<p>As Promet</p>	 <p>Current freezing facility.</p>	<p>Company in North Mitrovica. Has small freezing facility and new larger facility in progress with aid of KCBS. Currently sells to Serbia and will work with us on finding new markets for his billberries. Excellent quality product already of export standard. Needed help with packaging.</p>
<p>Hit Flores</p>		<p>Well established company in middle of billberry region of Dragash. Company has chillers and are collecting and marketing to Serbia. Have potential to cooperate with companies with freezing capacity.</p>
<p>Junipery Fructus, Dragash</p>		<p>Well established company well situated in billberry growing region. Company is mainly involved in juniper berries and has new drying facility. Now involved in billberry reception and can cooperate with other companies such as Hit Flores to shill berries.</p>

Berati		This is a small collector facility in the Rugova region. Company does not have chiller and the owner would like to obtain somehow either through his customer: Agroproduct Commerce or a grant. Individual was a wealth of information about collection system in the area. Runs a store that is a central commerce place in the region.
Cooperative Rugova	 <p>Mehmet Lajqi Pronar / Owner</p> <p>tel/fax: +381 (0) 38 553 345, mob: +377 (0) 44 500 555 e-mail: mehmet.lajqi@kooperativarugova.com, office@kooperativarugova.com web: kooperativarugova.com</p>	Met at the KCBS office. Had questions on specific billberry export questions from potential customers.
Cooperative Rugova	 <p>Përparim Rexha Drejtor / Director</p> <p>tel/fax: +381 (0) 38 553 345, mob: +377 (0) 44 283 543 e-mail: perparim.rexha@kooperativarugova.com, office@kooperativarugova.com web: kooperativarugova.com</p>	
Other meetings	 <p>»VLLESA - CO« INSTITUCIONI MICRO FINANCIAR PËR PAGESA KOSOVË</p> <p>Ecc. Gani Sallauka pronar</p> <p>Adresa: Rr. Brigada 123 p.n Therande (Suharekë) Tel: & Fax: 029 / 71 695 Mob: 044 / 184 479 e-mail: imf-villesa-co@hotmail.com</p>	Plastic container maker for berries.



	<p>N.T.P. Export - Import</p> <p>ETI 19</p> <p><u>Eroll Gjergjizi</u></p> <p>Tel. 029/25-198 & 23-268 Privat: 26-252 38400 Prizren Kosova</p> <p>mob. +905327720403 +381 29 25 198</p> <p>029 24 24 33</p>	<p>Part of Progress Co., Has very old IQF tunnel for rent.</p>
	 <p>Meta Company Reciklimi i letrës Fabrika e ambalazhës transportuese</p> <p>Nazmi Meta Ex. Manager</p> <p>Mob: +377 (0)44 665 639 Phone: +377 (0)44 176 286 Phone: +377 (0)44 157 441 Fax: +381 (0)38 516 390 E-mail: nazmimeta@yahoo.com</p>	<p>A packaging company that produces export-style cardboard packaging. Discussed sizes and strengths for bilberry shipments.</p>
	 <p>PRODHIMI I AMBALAZHEVE PREJ KARTONI</p> <p>Rromir Shalqini</p> <p>Mob. +377(0) 44 126 720 +377(0) 44 120 360 Tel. +381(0) 29 45 136 e-mail: rrshalqini@yahoo.com www.rrul-pak.com</p> <p>PRIZREN</p>	<p>A packaging company that produces export-style cardboard packaging. Discussed sizes and strengths for bilberry shipments.</p>



Bilberry Marketing

Thomas J. Payne

Kosovo Cluster Business Support

Kosovo Bilberry Workshop

1. Background – to give understanding to be a better seller
2. The World Market
3. Production
4. Marketing/Market Development
5. The Future



1.

Vaccinium

- ***Vaccinium*** is a [genus](#) of [shrubs](#) in the plant Family [Ericaceae](#) including the [cranberry](#), [blueberry](#), [bilberry](#) or whortleberry, [cowberry](#) or lingonberry, and [huckleberry](#). The genus contains about 450 species, which are found mostly in the cooler areas of the [Northern Hemisphere](#), although there are tropical species from as widely separated areas as Madagascar and Hawai'i. The plants prefer [heath](#) landscapes, as well as open forests. definition

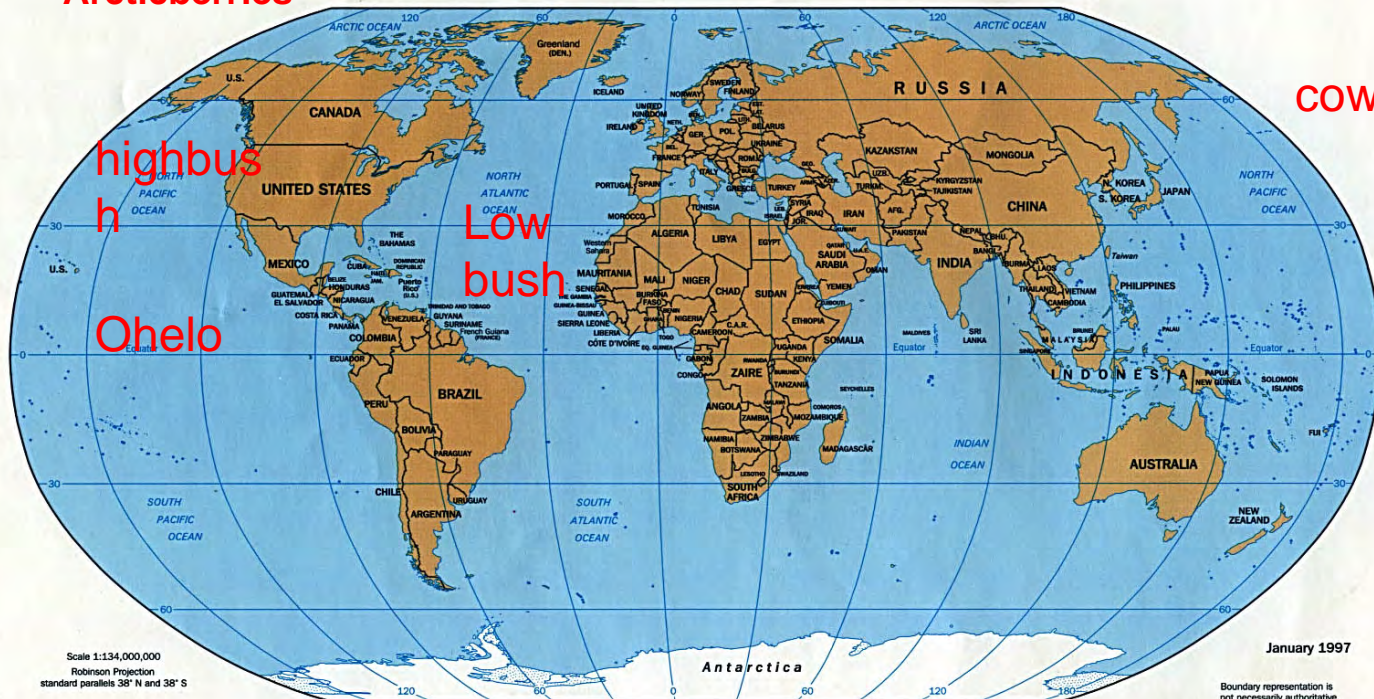


Blueberry World

Arcticberries

Saskatoon

cowberries



Commercial Blueberries

- Highbush
- Lowbush
- Bilberry
- Aronia
- Others

Kingdom	<i>Plantae</i> – Plants
Subkingdom	<i>Tracheobionta</i> – Vascular plants
Superdivision	<i>Spermatophyta</i> – Seed plants
Division	<i>Magnoliophyta</i> – Flowering plants
Class	<i>Magnoliopsida</i> – Dicotyledons
Subclass	<i>Dilleniidae</i> –
Order	<i>Ericales</i> –
Family	<i>Ericaceae</i> – Heath family
Genus	<i>Vaccinium</i> L. – blueberry

Vaccinium L. blueberry

Click on the image below to enlarge it and download a high-resolution JPEG file.

Symbol: *VACCI*
Group: *Dicot*
Family: *Ericaceae*
Duration:
Growth Habit:
U.S. Nativity:



V. angustifolium
lowbush blueberry



V. atrococcineum
dwarf blueberry



V. corymbosum
highbush blueberry

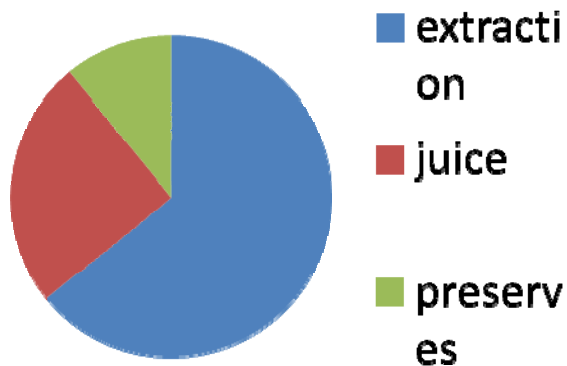
Courtesy of USDA Forest Service. [Usage Requirements.](#)

Bilberry

- *Vaccinium Myrtillus*
 - West Europe
 - Central Europe
 - Scandinavia
 - Russia Far East/China



Sales



Need to Know

- Similar products/different marketing channels, prices.
- Little or no interchangeability
- Billberries cannot be cultivated.
- You are in one of the main growing areas of the world.
- Always a demand for bilberry

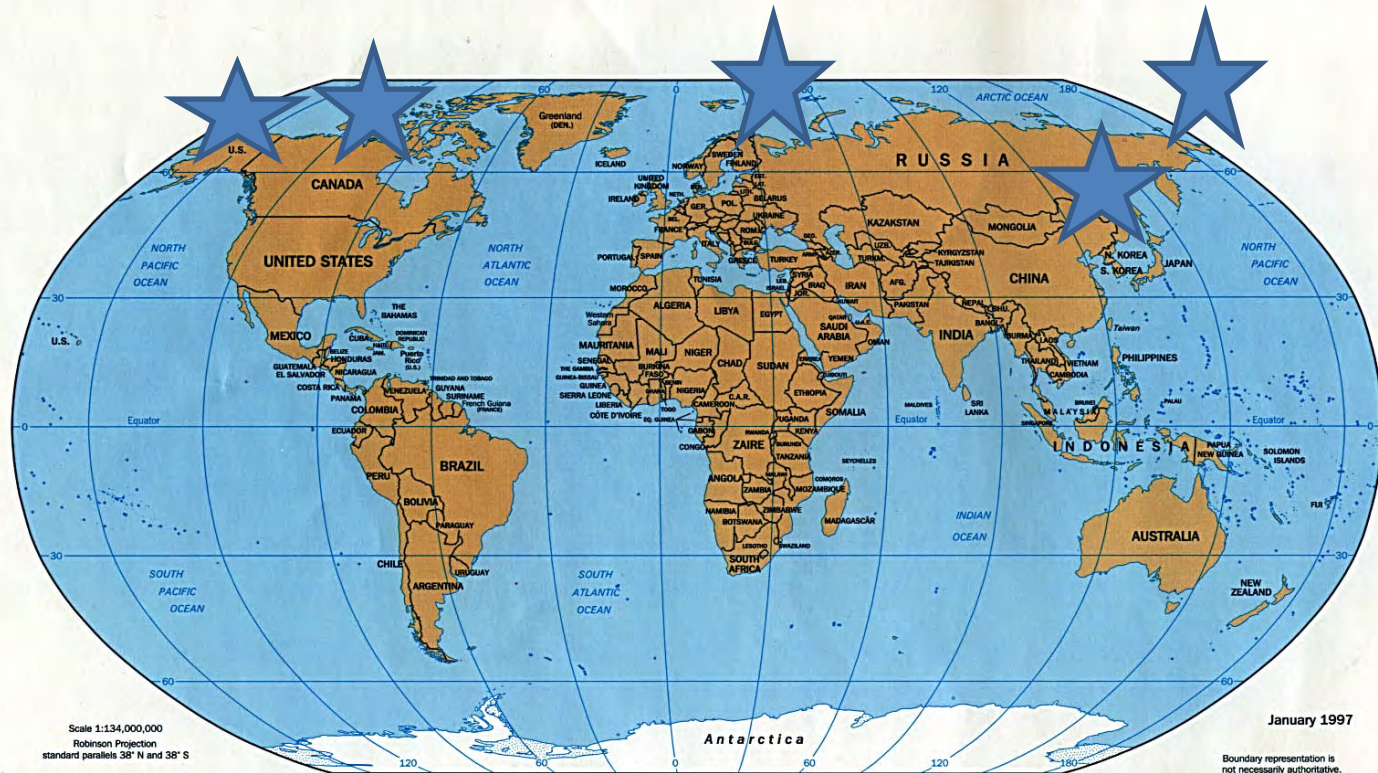


2. The World Market

- Trade
- Producers
- End Users
- Channels



Producers

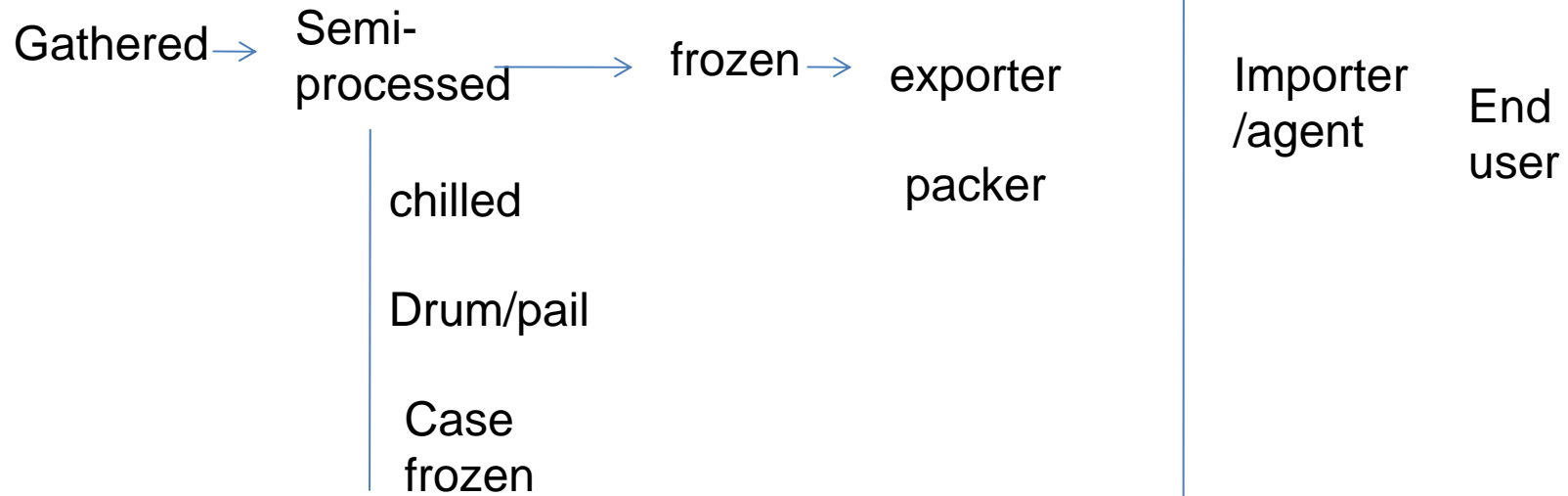


End Uses

- Bilberry powder
- Bilberry preserves
- Bilberry Juice
- Cosmetics



Trade Channels





Vaccinium

Trade

Reporting Country	United States Dollars		
	2005	2006	2007
Reporting Total	99,803,337	145,830,452	
United States	36,617,698	55,579,815	
United Kingdom	20,795,743	36,681,607	
Canada	11,134,420	19,016,470	
Netherlands	6,097,281	9,197,219	
Japan	8,147,990	7,248,334	6,997,622
Italy	2,846,533	2,697,340	
Belgium	2,936,779	2,553,704	
Hong Kong	1,147,663	1,385,864	2,271,525
China	1,146,000	715,530	2,188,764
Australia	1,199,919	1,183,932	1,904,645
Norway	258,604	415,405	1,404,175
Switzerland	587,284	935,290	1,371,571
France	1,185,224	1,491,727	
Germany	1,837,565	2,418,324	
Sweden	202,915	260,815	
Austria	735,113	905,377	


China Import Statistics
Commodity: 081040, Cranberries, Bilberries And Other Fruits Of The Genus Vaccinium, Fresh
Year To Date: January - May


Year To Date ▾ May ▾ 2007 ▾ 

HS: 081040 ▾ 

Rank	Partner Country	United States Dollars			% Share			% Change 2007/2006
		2005	2006	2007	2005	2006	2007	
	World	1,146,000	715,530	2,188,764	100.00	100.00	100.00	205.89
1	Sweden	1,146,000	524,376	1,200,186	100.00	73.28	54.83	128.88
2	Russia	0	0	850,486	0.00	0.00	38.86	
3	Finland	0	81,490	138,092	0.00	11.39	6.31	69.46
4	Denmark	0	109,664	0	0.00	15.33	0.00	-100.00

Sweden Import Statistics
Commodity: 081040, Cranberries, Bilberries And Other Fruits Of The Genus Vaccinium, Fresh
Year To Date: January - March

Year To Date ▾ Mar ▾ 2007 ▾ 

HS: 081040 ▾ 

Rank	Partner Country	United States Dollars			% Share			% Change 2007/2006
		2005	2006	2007	2005	2006	2007	
	World	96,582	101,788	856,483	100.00	100.00	100.00	741.44
1	Netherlands	63,767	46,944	612,302	66.02	46.12	71.49	1204.32
2	Germany	369	0	131,758	0.38	0.00	15.38	
3	Belgium	31,948	29,095	60,627	33.08	28.58	7.08	108.38
4	Denmark	0	132	29,611	0.00	0.13	3.46	∞
5	Italy	499	5,039	21,482	0.52	4.95	2.51	326.34
6	Spain	0	794	702	0.00	0.78	0.08	-11.57
7	Finland	0	19,785	0	0.00	19.44	0.00	-100.00

Quality Components

- Anthocyanin
- Berry Size.
- Lack of foreign materials
- Origin



Pure Anthocyanin in acid
base

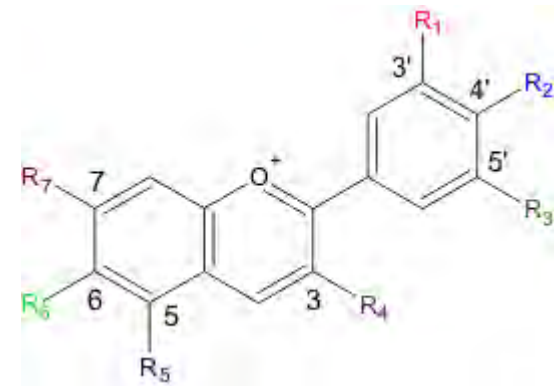
Packaging

- 26-30 lb
approx. (11.79
-13.6 kg)
- Plastic lining.
- Box dimension
400mm x
300mm x
200mm
(length, width,
height).



Anthocyanin

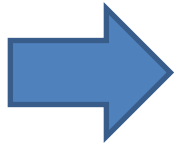
- Anthocyanins** (from Greek: *άνθος* (*anthos*) = flower + *κυανός* (*kyanos*) = blue) are water-soluble vacuolar flavonoid pigments that appear red to blue, according to pH. They are synthesized by organisms of the plant kingdom and bacteria, and have been observed to occur in all tissues of higher plants, providing color in leaves, stems, roots, flowers, and fruits.



Anthocyanidin	R ₁	R ₂	R ₃	R ₄	R ₅	R ₆	R ₇
Aurantidin	-H	-OH	-H	-OH	-OH	-OH	-OH
Cyanidin	-OH	-OH	-H	-OH	-OH	-H	-OH
Delphinidin	-OH	-OH	-OH	-OH	-OH	-H	-OH
Europinidin	-OCH ₃	-OH	-OH	-OH	-OCH ₃	-H	-OH
Luteolinidin	-OH	-OH	-H	-H	-OH	-H	-OH
Pelargonidin	-H	-OH	-H	-OH	-OH	-H	-OH
Malvidin	-OCH ₃	-OH	-OCH ₃	-OH	-OH	-H	-OH
Peonidin	-OCH ₃	-OH	-H	-OH	-OH	-H	-OH
Petunidin	-OH	-OH	-OCH ₃	-OH	-OH	-H	-OH
Rosinidin	-OCH ₃	-OH	-H	-OH	-OH	-H	-OCH ₃

3. Production

- Fresh
- IQF
- Tray Frozen
- Case Frozen
- Other
 - Drum picked
 - Dehydrated
 - Osmotically preserved



Case Frozen

- Advantage
 - Less handling
 - Cost of equipment
 - Sorting to juice stock up front
- Disadvantage
 - sticking



picked → cleaned → chilled → boxed → frozen

3. Marketing/Market Development

- Producers
- Buyers
- Brokers
- End users

Demand Determinants

- Pre-season requirements (end users)
- 100 serious players, supply end users
- In the field inquiries
- Product description
- Sampling
- Pricing
- Logistics
- Payment

Pre-season requirements (end users)

- Western Frozen Fruit Conference
- Supply Side West
- Food Institute Report

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Annual Fruit Crop 'Guesstimate' to be Held June 20

May 2, 2007 - The 52nd Annual Fruit Crop Guesstimate, sponsored by the Michigan Frozen Food Packers Association (MFFPA) and drawing participants from across the nation, is scheduled for 2 p.m. June 20 at the Amway Grand Plaza in Grand Rapids, Mich.

The Guesstimate includes presentations by industry representatives from the various U.S. fruit producing regions, resulting in an overall estimate of U.S. production of peaches, blueberries, sweet cherries, apples, grapes and tart cherries.

A reception follows, during which attendees can network.

Registration (by June 9) costs \$75, payable to the MFFPA, P.O. Box 448, South Haven, MI 49090.

Players



- Sun Opta
- Chinese Companies
- Brokers

2008 AFFI Frozen Food Convention

AFFI
Frozen Food
Convention

February 23-27, 2008

Sheraton San Diego Hotel & Marina
San Diego, California

Mark your calendar!

Join us for the **40th** anniversary of the Convention. AFFI's signature event.

Pricing

PRICE TRENDS OF FROZEN BLUEBERRIES

(Source: Food Institute Surveys of Processors, Brokers and Buyers)

2006												
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
30-lb., Mich.	1.95- 2.05	2.05- 2.15	2.15- 2.40	N/A	N/A	N/A						
30-lb. Maine	N/A	N/A	N/A	N/A	N/A	N/A						
30-lb. Southeast					1.70- 1.75	1.70- 1.75						
2005												
30-lb., Mich.	1.15- 1.16	1.17- 1.18	1.17- 1.22	1.20- 1.25	1.20- 1.25	N/A	1.10- 1.15	1.20- 1.25	1.50- 1.50	1.60- 1.75	1.73- 1.76	1.85- 1.90
30-lb. Maine	N/A	1.25- 1.35	1.40- 1.45	1.40- 1.45	1.40- 1.45	N/A	N/A	N/A	1.42- 1.45	1.50- 1.60	N/A	N/A
2004												
30-lb., Mich.	1.10- 1.15	1.10- 1.15	1.10- 1.15	N/A	1.15- 1.20	N/A	N/A	1.05- 1.10	1.12- 1.15	1.10- 1.15	1.12- 1.15	1.12- 1.15
30-lb. Maine	1.00- 1.10	1.00- 1.10	1.03- 1.05	1.03- 1.05	1.00- 1.10	N/A	N/A	1.05- 1.10	1.07	1.07	1.07	1.07
2003												
30-lb., Mich.	0.85- 0.90	1.10- 1.15	1.10- 1.15	1.10- 1.15	1.10- 1.15	1.06- 1.12	1.00- 1.08	1.05- 1.10	1.00- 1.10	1.12- 1.15	1.12- 1.15	1.00- 1.15
30-lb. Maine	0.75- 0.78	0.84- 0.88	0.84- 0.88	0.84- 0.88	0.85- 0.90	0.85- 0.95	0.85- 0.95	0.95- 1.00	0.95- 1.00	0.95- 1.10	1.00- 1.10	1.00- 1.10
2002												
30-lb., Mich.	0.62- 0.68	0.64- 0.68	0.64- 0.68	0.74- 0.78	0.74- 0.78	0.75- 0.77	0.74- 0.78	0.80- 0.84	0.80- 0.86	0.85- 0.88	0.94- 0.96	0.85- 0.90
30-lb. Maine	0.90- 1.00	0.90- 1.00	0.80- 0.94	0.80- 0.94	0.80- 0.94	N/A	0.68	N/A	N/A	0.87- 0.90	0.65- 0.83	N/A

Monthly per pound processor prices for private label product, f.o.b. area indicated.

Premium to blueberry
4.8 Euros per kg last season
end average

Specifications

- **CERTIFIED ORGANIC**
- **WHOLE IQF or CASE FROZEN WILD BLUEBERRIES**
- **Product description:**
- Organic Ingredients' *Wild Blueberries* are picked certified organic fields and prepared from properly ripened fresh berries that have been cleaned and sorted to meet EU and USDA standards of quality.
- **Processing:**
- The wild blueberries are frozen, inspected and placed into bags or cartons, and then stored at minus 18 C or below to preserve the quality of the product.
- **Brix:** 10-12°
- **Grade:**
- Defects: 20 stems/lb (target)
- Not to exceed 8 green berries per 1 lb sample
- **Microbiological:**
- Aerobic Plate Count: less than 20,000/ gram
- Coliforms: less than 100/ gram
- Yeast/Mold combined: 5000/ gram (target)
- 8000/ gram (max)
- E.Coli: Negative
- Coagulase Positive Staph: Negative
- **Packaging:** 30 lbs net per case
- **Storage:** Frozen at or below 0°F.

Sampling

- Pre-qualify lead.
- Send digital info first
 - Show size
 - Color, exterior, interior
- Description
 - Species
 - Gathering region
- Ask for payment of sample shipment
- Keep duplicate sample

Logistics

- Pallet Stacking/Weight
- Ocean Freight - Thessaloniki
- Freight Forwarders
- Payment
- Dispute avoidance
- Insurance

Kuehne + Nagel's Complete Suite of Supply Chain Solutions

Seafreight



Airfreight



Rail & Road



Contract Logistics



Lead Logistics



Strategic Solutions



Future

- Rising Demand in Blueberry/Bilberry
- North Chinese production
- End users are willing to come to source





Blueberry Market Development Specialist

Kosovo Cluster & Business
Support

Assignment

- Assess Kosovo bilberry industry current situation
- Assist with immediate steps for current market
- Advise on steps for market development



Activities

- On site meetings
- Training Seminar
- Development of manual
- Market development



Meetings



- Handlers/Processors
 - Agroprodukt Commerce
 - EuroFruit, Mramor
 - Fungo FF, Kamanica
 - Scardus, Shtpce
 - Promet, Leposavic
 - Hit Flores, Dragash
 - Juniper Fructus, Dragash
- Cold Chain Contacts



Seminar

- Bilberries
- Processing
- Sales
- Market
Development



Key Findings



- A valuable commodity,
- strong, dynamic market.
- Moving towards industry practices and processes.
- On the map for international buyers.



Valuable Commodity

- Vaccinium Myrtillus
 - Nutraceuticals Market
 - Extraction
 - Freeze Dry/Powder
 - Juice Market
 - Preserves



Competitive Strengths



- Kosovo, largest block of available Bilberry on earth.
- Billberry cannot be cultivated
- High levels of anthocyanin
- Strong Asian Market
- Few regions of world where hand picking is possible

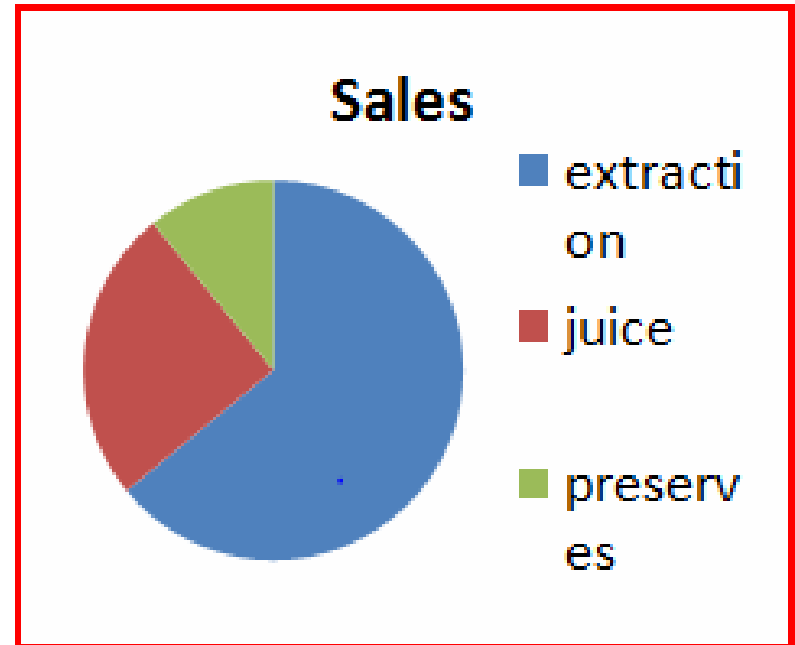
Industry Practices

- All the pieces of puzzle are in place
 - Pre-cooling
 - Sorting
 - Freeze
 - Marketing



The Marketplace

- -90% of all bilberries are utilized by ten companies
- -Almost all bilberries are marketed through specialized trading companies
- -World standard for bilberry is case/tray frozen



China – Korea – Japan – USA -
Europe

China Import Statistics
Commodity: 081040, Cranberries, Bilberries And Other Fruits Of The Genus Vaccinium, Fresh
Year To Date: January - May

Year To Date ▾ May ▾ 2007 ▾ [go](#)

HS: 081040 ▾ [go](#)

Rank	Partner Country	United States Dollars			% Share			% Change 2007/2006
		2005	2006	2007	2005	2006	2007	
	World	1,146,000	715,530	2,188,764	100.00	100.00	100.00	205.89
1	Sweden	1,146,000	524,376	1,200,186	100.00	73.28	54.83	128.88
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3	Finland	0	81,490	138,092	0.00	11.39	6.31	69.46
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Sweden Import Statistics
Commodity: 081040, Cranberries, Bilberries And Other Fruits Of The Genus Vaccinium, Fresh
Year To Date: January - March

Year To Date ▾ Mar ▾ 2007 ▾ [go](#)

HS: 081040 ▾ [go](#)

Rank	Partner Country	United States Dollars			% Share			% Change 2007/2006
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6	Spain	0	794	702	0.00	0.78	0.08	-11.57
7	Finland	0	19,785	0	0.00	19.44	0.00	-100.00

The Future

- Market expansion
- World bilberry standards
- Initial sales and shipments of opportunity
- World trade explorations to Kosovo
- Regular trade and marketing



Recommendations

- Documentation of market size characteristics and order
- Continued encouragement of packers to drive for world standards. (case studies)
- World Presence for Kosovo industry
- Commercial assistance



Recommendations

- Documentation of market size characteristics and order
 - Statistics, to educate buyers of the Kosovo industry.
 - Growing regions, maps
 - Technical brochure and specs



Recommendations

- Continued encouragement of packers to drive for world standards. (case studies)
 - Cooling
 - Freezing
 - Packing



Recommendations

- World Presence for Kosovo Industry
 - Vaccinnium Congress
 - Frozen Foods Meeting
 - Supply Side Expo



Recommendations

- Commercial Assistance
 - Assistance to visiting trading companies on recon
 - Pro- active communications to Chinese, Korean, Japanese processors (introductions, e-mail.)
 - Assistance with commercial inquiries. Presentation of prices, sampling negotiation.



ANNEX IV - PREPARING BILBERRIES FOR EXPORT

[NOTE: The world trade in blueberries consists of all fruit from the species *Vaccinium*. For the purposes of this discussion, we are including all commercially traded species of *Vaccinium* except highbush blueberries. However, wild “blueberries” collected in Kosovo are *Vaccinium myrtillus*, better known as bilberries.]

1. International Product Specifications for Case Frozen Blueberries

Product description:

Wild Blueberries are usually picked from areas that have been certified as “organic.” Finished products, such as jams, jellies and confectionary ingredients, are prepared from properly ripened fresh berries that have been cleaned and sorted to meet EU and USDA quality standards.

Processing:

Wild Blueberries are cleaned, inspected, placed into cardboard cartons with a plastic liner and then frozen. After freezing they are stored at minus 18 C (or lower) to preserve the quality of the product.

Brix: Wild Blueberries must have 10 -12° brix.

Grade:

Defects: not to exceed 44 stems/kg

Green/Immature berries: Not to exceed 17 green/immature berries per kg

Microbiological:

Aerobic Plate Count: less than 20,000/gm

Coliform: less than 100/gram

Yeast/Mold combined: Target of 5,000/gm; Maximum of 8,000/gm

E.Coli: Negative

Coagulase Positive Staph: Negative

Packaging: Corrugated cardboard carton containing 11.8 - 13.6 net weight of berries

Storage: Frozen at or below 0°F.

2. Interior and exterior packaging requirements in international markets for case (carton) frozen blueberries



The exterior dimensions of the cardboard carton are 400mm x 300mm x 200mm (length, width, height).

Typical net weight of the product inside the carton for export market is 11.8 - 13.6 kg with a plastic lining. The best weight is 13.6 kg/carton, but cartons containing 10.0 kg are not uncommon. The cardboard carton must be new (not previously used), although it may be made from recycled material. The carton must be very sturdy so that they may be stacked 7 layers tall. It must be sealed using plastic tape, not glue.

On a Euro-pallet that is 800mm x 1200 mm, 8 cartons will fit on one pallet layer. When 7 layers are placed on the pallet there are 56 cartons per pallet, which will have 761.6 kg of berries. On a Euro-pallet that is 1000mm x 1200 mm 9 cartons fit on one pallet layer. When 7 layers are placed on this bigger Euro-pallet, there are 63 cartons with a net berry weight of 856.8 kg.

Ocean Containers:

Refrigerated ocean containers are two sizes, 20 feet (6.1 m) and 40 feet (12.2 m). The long containers are much more economical to use than the short ones, but the risk of product problems is more concentrated, too.

3. International Buyers for Case Frozen Blueberries

COMPANY	COMMENTS
USA	
Blue California Co.	Important buyer of natural food

<p>Steven Chen 30111 Tomas Rancho Santa Margarita, CA 92688 Phone: 949-635-1990 Fax: 949-635-1988 E-mail: sales@bluecal-ingredients.com</p>	<p>ingredients</p>
<p>Glorybee Foods, Inc. Richard Turanski 120 N. Seneca Eugene, OR 97402 Phone: 503-689-0913 E-mail: dick@glorybeefoods.com</p>	<p>Largest supplier of health foods in USA</p>
<p>F & C Wild Flavors, Inc. Jeff Stopa 1261 Pacific Avenue Erlanger, KY 41018 Phone: 859-342-3600 Fax: 859-342-3610 purchasing@wildflavors.com Web Site: www.wildflavors.com</p>	<p>American Division of large German flavor and juice company. Biggest buyer of European bilberry juice.</p>
<p>Van Drunen Farms Carl De Vries 300 W. 6th Street Mokena, IL 60954 Phone: 815-472-3100 E-mail: cdevries@vandrunen.com Web Site: www.futureceuticals.com</p>	<p>Largest freeze drier in US. Have a company branch in Serbia.</p>
<p>Pacific Ingredient Exchange Rich Branson 7960-B Soquel Avenue, Apt. #383 Aptos, CA 95003 Phone: 831-685-6535 E-Mail: pie@pacificingredient.com Web Site: www.pacificingredient.com</p>	<p>Buyer of second class bilberries for making juice.</p>
<p>Steib Pomegranate Products Steve Troehler 11767 Road, #27-1/2 Madera, CA 93637 Phone: 559-250-0906 559-661-0032 Web Site: www.pomegranateseedoil.com E-mail: troehler@lightspeed.net</p>	<p>Buyer of bilberries for juice processing and blending</p>
<p>SunOpta Inc. Beta Pure Foods 335 Spreckles Drive, #D Aptos, CA 95003 Phone: 831-685-6565 Fax: 831-685-6569</p>	<p>Among largest importers and marketers of bilberries in US.</p>

Billberry Buyer: Loren Morr E-mail: loren.morr@sunopta.com	
EUROPE	
Solex SRO Tomas Matula Partyzanska 13 79201 Bruntal Czech Republic Phone: 42-0-554-713-128 E-mail: solexagro@solexagro.cz Tomas.matula@solexagro.cz Web Site: www.solexagro.cz	One of largest billberry processors/sellers in Europe, with branches in many countries of Central Europe.
ASIA	
MAX Dragon Mr. Guo Room 305b, Guangxinghua Building 18# 2 nd Street South Siyou, Yuexiu Zone Guangzhou City, P. Guangzhou, Guangdong China Phone: 86-20-87384586 Web Site: www.maxdragon.com	
Nishimoto Trading Company Nobuo Yoshino 13409 Orden Drive Santa Fe Springs, CA 90670 Phone: 562-229-3853 E-mail: nobuo.yoshinontdtusa.com	Largest importer of blueberries in Asia. Mr. Yoshino will visit Balkans in fall 2007.
Inabata Trading Company Mr. Takuo Inoue 2-8-2, Nihonbashihoncho Chuo-ku Tokyo 103-8448 Japan Tel: 81-3-3639-6415 Fax: 81-3-3639-6410 E-mail: inoue.taku@inabata.com	
Konishiyasu Company Ltd. Mr. Shigeki Oka E-mail: shigeki-oka@konishiyasu.com Hitoshi Morotomi E-mail : morotomi@konishiyasu.com International Department / Konishiyasu Co., Ltd.	One of the oldest food chemical companies in Japan

2-6-3 Nihonbashi Honcho Chuo-ku, Tokyo ,103-0023 Japan Tel: 81-3-3661-3175 Fax: 81-3-3661-4837	
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4. Intermediaries or Freight Forwarding Agents for Case Frozen Blueberries

The cost for shipping a sea container of frozen bilberries from a Balkan port to the east coast of China is about 4,800 €.

The cost is based on the weight of the products, the value, and the insurance. Most shippers insure frozen products.

Buyers may ask for two price quotations: 1) the cost of the blueberries at your factory, and 2) the cost of the blueberries delivered to the buyer. Most will use their own freight forwarding agents. These agents are experts at finding inexpensive shipping costs.

International freight forwarding companies used by bilberry buyers:

- Kintetsu Express - <http://www.kintetsu.com/>
- Nippon Express - <http://www.nipponexpress.net/>
- Panalpina - <http://www.panalpina.com/www/global/en/home.html>
- BAX Global (USA) - <http://www.baxglobal.com/>
- Kuehn & Nagle - <http://www.kn-portal.com/>
- Shenker (with an office in Kosovo) --
http://www.schenker.com/index_en/index.html

5. Important International Events in the Blueberry Industry

- A. International Symposium on *Vaccinium* Culture: These meetings are held every several years and are sponsored by the International Society of Horticultural Science (www.ishs.org/calendar/index). The next symposium will be held 14 – 18 July 2008 at Oregon State University in Corvallis, Oregon, USA.
- B. AFFI Frozen Food Convention: This was previously called the Western Frozen Food Conference. This event is held annually and is sponsored by the American Frozen Food Institute (www.affi.com). The next convention will be held 23 – 27 February 2008 in San Diego, California,

USA. All of the major international buyers and sellers of bilberries attend this event.

6. Two Steps to Attract Foreign Buyers

A. Digital Images

Digital photographs of bilberries can provide a prospective buyer with clear images of the product being offered. As illustrated below, three images will convey the information the buyers are seeking. The images should be recorded on white grid paper (graph paper) with an indication of the scale. The three images required are:

1. whole bilberries
2. cut bilberries showing inside color
3. smeared bilberry to show color

B. Laboratory Analysis of Anthocyanin in Bilberries

The other piece of information important to foreign buyers is the level of pigment, or anthocyanin, in the berries. Bilberries are processed almost exclusively to extract the pigment, or color. The results of laboratory quantitative analysis will provide scientific evidence of the value of the berries. The nearest laboratory with experience in conducting this analysis is the Veterinary Institute in Kraljevo, Serbia, where the Director is Dr. Vesna Kljajevic. The Kosovo Institute of Agriculture in Peje has been given the procedures; they recently acquired the equipment needed to perform the analysis but they have not yet attempted to do so.