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# COMMODITY DEVELOPMENT PLAN: WATERMELONS

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# COMMODITY DEVELOPMENT PLAN: WATERMELONS

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# ACRONYMS

AAC	Albanian Agricultural Competitiveness
AFADA	Albanian Fertilizer and Ag-Input Dealers Association
CDP	Commodity Development Plan
CEE	Central and Eastern European
MoAFCP	Ministry of Agriculture, Food and Consumer Protection
MT	Metric Ton
TTC	Technical Transfer Center



# INTRODUCTION

This Commodity Development Plan (CDP) is prepared by the Albania Agricultural Competitiveness (AAC) Program and focuses on the melon sector in Albania. The CDP serves multiple purposes: (1) it presents the melon value chain analysis and describes the current situation including the actors, constraints and opportunities; (2) it presents a common vision of where the watermelon value chain should be heading in order to maximize efficiency and profits throughout the chain; and (3) it describes the actionable activities that will be required to achieve the goals set out in the vision. The CDP serves as a guide to AAC activities in the watermelon sector and will be updated annually to ensure that AAC activities are responsive to the needs of the value chain.

This study focuses on watermelons because other melon varieties (such as musk melon or cantaloupe) are primarily grown for the domestic market with little export. The main focus of Albanian commercial producers and traders is on watermelons, where there is strong export potential to the European Union (EU) and the Balkan region. Albania has competitive advantage with this product as Albanian melons are early in the season for the European and Balkan markets.<sup>1</sup>

This analysis and plan for the watermelon sector was prepared in several stages. First, desktop research was conducted to build upon existing knowledge. Then in September 2007, one week of field research was conducted. This research included interviews with key value chain actors, focus groups, and other data gathering. In April 2008, the actionable steps and Commodity Development Plan were finalized based on field research as well as on data published in the AAC report *Seedless Watermelons: Albanian Export Opportunities to Europe and the Region*.

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<sup>1</sup> Further details on the value chain selection process can be found in the AAC Publication *AAC Subsector Selection Report*.



# OVERVIEW OF THE WATERMELON SUBSECTOR

The watermelon subsector is relatively fragmented, particularly at the production and marketing levels. Since the break-up of large centralized farms in the early 1990s, watermelon, like other crops, is now produced on small fragmented plots. The average farm size in Albania is 1.1 hectares, but divided into four non-contiguous plots. As a result, production is dominated by small producers with limited land, although there have been some advances in the formation of producer associations in recent years. While many Albanian producers in the south and central regions have access to information on production technology being applied in Greece from working there directly, or gaining information from others who have, the northern regions of Albania lag behind on adoption of these improved technologies. The last decade has seen the emergence of leading traders such as Aris, AgroKoni and Bruka who are focusing on watermelon and provide leadership to the sector, but watermelon marketing is still highly opportunistic.

As indicated in Table 1 below, watermelon's importance as an agricultural export from Albania varies considerably from year to year.<sup>2</sup> For example, exports to Greece rose from 0 to 1,093 from 2002 to 2006, and then fell back to 138 in 2007. The situation is similar in Italy, with Albanian melon exports jumping from 22 to 701 over the same four year period, and then dropping to 138 in 2007. This implies that there may be no established trading partners, although it might also be a reflection of poor data capture (due to informal trade).

**TABLE 1: ALBANIAN WATERMELON EXPORTS TO BALKAN STATES**

Reporting Country	Quantity					
	2005		2006		2007	
	1000 kg	\$1,000	1000 kg	\$1,000	1000 kg	\$1,000
Kosovo	9493.18	518.91	6151.98	506.48	7447.26	926.14
Serbia & Montenegro	228.60	32.30	2272.58	302.16	2378.49	393.29
Macedonia	254.30	29.70	297.85	48.04	679.97	99.05
Bosnia Herzegovina	193.46	16.82	263.17	34.42	482.23	54.58
Bulgaria			222.30	15.86	823.16	43.31
Croatia			88.75	14.92	45.80	7.47
Moldova	20.50	3.65				
Slovenia	22.04	3.22				
Total	10212.08	604.60	9296.63	921.88	11856.91	1523.84

Source: ACIT 2008 Website

## WATERMELON MARKET OPPORTUNITIES

Albania is the largest per capita consumer of watermelons in the world at 146.93 kg per person<sup>3</sup>. Until recently the Albanian watermelon chain was focused mostly on meeting domestic demand for the

<sup>2</sup> These calculations are based on data obtained from the Global Trade Atlas for exports to the 25 EU countries that show that total value of vegetable, fruit and nut exports to the EU were \$4,943,089 in 2006 and 5,516,506 in 2007.

<sup>3</sup> Source: Faostat data 2006 at www.fao.org.

fruit. The majority of watermelon production is still destined for the local market, passes through wholesale markets and then on directly to consumers, petty traders, and retail stores. But this market is becoming saturated. There is now a common understanding at all levels of the chain that further growth in the volume of watermelon sales will need to come from producing earlier season varieties, expanding exports, and growing new high export demand watermelon such as personal/mini and seedless.

A promising market opportunity in both domestic and export markets is early season watermelon. Demand for watermelon is traditionally correlated to the weather: as the temperature increases, so the demand for watermelon increases. There is strong demand in both the domestic and export markets for early season watermelon, and extending the season forward would enable producers to meet this demand. For example, no producer in Europe or the CEE currently produces watermelon prior to mid-May. However, market demand starts to upswing in April, and begins to peak in mid-May. If Albanian producers were able to push forward first harvest watermelons, they would face limited competition, primarily coming from Morocco and Central America, and could command a price premium for their product.

The export opportunities for Albanian watermelons are in two distinct markets, the regional Balkan market and the markets beyond including the EU. Albania has a geographical advantage in both markets as the bulk of world melon trade tends to be concentrated within proximate geographic regions, due largely to transportation costs.

The regional Balkan market currently dominates Albanian watermelon exports. This can be seen from the data in Table 1, with 95 percent of the watermelons exported from Albania in 2007 going to the regional market. Almost half of all Albanian melon exports in 2007 went to Serbia (which at the time included Kosovo). It is believed that many of the melons exported to Kosovo were then re-exported to other markets. Other countries in the region where Albania has been successful in exporting watermelons include Montenegro, Moldova, Romania, Bulgaria, and Croatia. There is increasing regional demand for non premium varieties of watermelon, with imports growing on average 55 percent per year from 2001 to 2006. Prices paid by most CEE countries (excepting Albania) are also lower than the average world price of imports. For example, in 2006 Bulgarian importers paid on average \$200 per ton, compared to the global average price of \$466 per ton. As Albanian producers grow in sophistication and are able to produce higher quality premium varieties, these regional, less demanding markets should be the focus for secondary quality product, while the EU premium markets should be the primary target for real growth.

The western European market presents a real requirements are more stringent and the logistics more complex. As indicated in Table 2, Germany,

**TABLE 2: TOP 15 GLOBAL WATERMELON IMPORTS**

Country	Vol. Of Imports 2007 (MT)
United States	409,483
Canada	199,697
Germany	177,300
China	167,017
Poland	91,413
France	80,175
Czech Republic	75,397
Netherlands	68,914
Russia	66,591
Hong Kong	55,980
United Kingdom	51,815
Bulgaria	36,970
Italy	34,219
Singapore	32,415
Austria	24,261

France, the Netherlands, and the UK are all large and growing markets. Between 2001 and 2005, imports in these four countries alone increased by 28 percent in terms of value, reaching \$265 million and 378,000 tons.

The European market in general pays a higher price on average for watermelon than the global markets (\$595/MT in 2006), and there is evidence that consumers are willing to pay a premium price for specialty watermelons. The value of global watermelon exports between 2002 and 2005 grew by 24 percent while production volume grew by only eight percent, indicating a global move to smaller watermelons and varieties such as seedless which can command a price premium<sup>4</sup>. In December 2007 sample prices for seedless watermelons from the Rotterdam Wholesale Market were \$1.61 to \$1.76 per kg for Red Flesh Seedless. At the same time Mickey Lee, a common seeded variety, sold for \$0.59 per kg, a wholesale mark up for the seedless of almost 300 percent<sup>5</sup>.

The real market opportunity for Albania in the European market is the niche market of smaller seedless melons. To enter into global markets, particularly western Europe, Albania will face stiff competition. The proximity of Albania to the European markets is a boon, but producers must also compete against leading European producers close by—particularly Italy and Greece. The most effective ways to compete with these countries are through earlier season varieties (discussed above) and cost. Production of small seedless varieties should be considered a minimum requirement of entry, as this variety now dominates European demand. A survey of fresh fruit importers in Europe indicated that traceability and quality were baseline requirements, while there were only three reasons why a buyer would take on a new supplier: price advantage, off-season opportunity, and/or a unique product.<sup>6</sup> Albanian exports are currently competitive with an average price for Albanian melon exports \$250/MT in 2008, meaning that the country currently does have a price advantage, although without accurate cost of production information, it is difficult to assess whether this is an actual competitive advantage.

Regional producers are presented in Table 3 and include Spain, Italy, Greece, and Turkey. Romania is by far the largest producer within the Central and Eastern European (CEE) region.

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<sup>4</sup> OTF Group. Seedless Watermelons: Albanian Export Opportunities to Europe and the Region. Albanian Agricultural Competitiveness publication. December 19, 2007.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

**TABLE 3: WATERMELON EXPORTING COUNTRIES**

Country	Global Export Ranking 2007 (By Volume) <sup>7</sup>	Volume Of Production MT <sup>78</sup>	Volume Of Exports 2007 <sup>9</sup>	Value Of Exports 2007 (USD)
Spain	2	723,000	288,673	177,610,685
Italy	5	519,000	107,994	42,258,682
Greece	6	697,000	104,152	33,600,408
Turkey	15	3,970,000	17,446	5,394,183
Romania	58	628,000	-	148,961 <sup>10</sup>

Albanian producers will need assistance in production to meet the EU's higher quality standards in product and packaging, as well as marketing assistance. The Albanian smallholder's watermelon marketing approach is currently generally opportunistic with little strategy or forward planning. While there are a few integrated consolidators that are working with the same producers from year to year, the majority of the producers wait for the market to come to their fields in the form of local traders or consolidators or buyers from the regional market. Producers often can only guess at the end market by seeing the type of transport and packaging that the traders bring to the field. The price offered to producers by these traders is often lower than the wholesale market prices according to the watermelon growers in Kafarai, Fier. Even so, producers are unwilling to take on the transaction costs of transporting their product to market and selling in small quantities. The result of this lack of strategic marketing is volatile prices, unpredictable volumes and increased risk that varies among the value chain actors.

## WATERMELON PRODUCTION

Albania is the fourth largest producer of watermelons in the CEE after Romania, Hungary and the Ukraine. In 2007, Albania produced 190,000 MT of watermelons<sup>11</sup>. It has been estimated that between 2,600 and 3,100 hectares of watermelon are planted each year, although this amount fluctuates based on producers' perceptions of the relative value of watermelon compared with other crops. As shown in Table 4 below, the area of watermelon planted in Saranda in 2008 is 25 percent lower than 2007 because 2007 prices fell due to a glut in the market. Further discussed below, the lack of formal marketing arrangements and fragmented production lead to uneven performance for the sub-sector as a whole, with high prices one year leading to increased planting the following year, and a resulting overabundance and low prices.

There are some value chain leaders that are moving away from this reactive approach. For example, Bruka seedling in Divjaka is encouraging producers to plant a 30 percent increase in area planted over 2007, in spite of the fact that 2007 was not a good year for watermelons.

<sup>7</sup> Global Trade Atlas Data.

<sup>8</sup> OTF Group. Seedless Watermelons: Albanian Export Opportunities to Europe and the Region. Albanian Agricultural Competitiveness publication. December 19, 2007

<sup>9</sup> Global Trade Atlas Data

<sup>10</sup> This figure is based on self-reporting trade data but is likely not an accurate reflection of Romania's watermelon export value.

<sup>11</sup> OTF Group. Seedless Watermelons: Albanian Export Opportunities to Europe and the Region. Albanian Agricultural Competitiveness publication. December 19, 2007.



**TABLE 4: MAJOR PRODUCTION AREAS FOR WATERMELON**

Area	Land Under Production (Ha)	Maximum Size	Average Yield (Commercial Producers)	First Harvest
Saranda	450	20 ha	62 <sup>12</sup>	June 5
Divjaka	400	5 ha	-	Early June
Berati	150	30 ha	60	June 10
Fieri	150	5+ ha	60-65 <sup>13</sup>	Early June
Lezhe/Shkodre	700	7 ha	28 <sup>14</sup>	July 1

Advanced production technologies such as plastic tunnels, double-line drip irrigation, fertigation, and grafted seedlings are being adopted by commercial growers in the key growing areas of southern Albania. On the other hand, producers in the northern areas of Albania, are somewhat behind in the adoption of these new technologies. Most of the melon production in Lezhe is in open fields which are direct seeded resulting lower production costs, but a later harvest. Approximately 60 percent of Lezhe area watermelons are produced under irrigation, primarily sprinklers using diesel or electric pumps. With rapidly rising fuel costs, reliance on these systems will increase their costs of production. In both southern and northern Albania, producers rely primarily on input suppliers for fertilizer recommendations rather than soil testing.

Most of the watermelons produced in Albania are variations of the Crimson Sweet variety including Crisby, Florida, Galaxy, Valentina, Paradise, Obla, Top Gun, Star, and others. There has been some experimentation with seedless varieties, but none have been produced on a commercial level. Variety selection is primarily driven by factors such as productivity, disease resistance, resilience against damage in transport, and cost (hybrid seeds being more expensive). There is an understanding that different markets require different characteristics, but producers may not be targeting specific market at planting time. Most value chain actors felt that size was the key characteristic that should be targeted to different markets. The Kosovo and Hungary markets prefer large melons (greater than 10 kg), the domestic market has a preference for medium melons, and the trend in the EU is for “personal melons” of 4.5 – 5.5 kg.

The costs of production vary widely from the Saranda area in the South to the Shkodra area in the north and are dependent upon land values and the production technology applied. Table 5 below illustrates representative costs in the three main production areas. Land rent in the Divjaka area is high when compared with the other areas, while the climatic conditions in Divjaka and Saranda are favorable for production of early season watermelon and thus heavier expenditures on inputs will yield greater over-all returns. The developed areas such as Lushnja, Divjaka, Berat, and Saranda plant grafted seedlings providing an earlier harvest while the North direct seeds. The cost per hectare for grafted seedlings varies between 20,000 lek to 50,000 lek per hectare compared with 1800lek to 1500lek for cultivar seeds and 2000lek to 15000 lek for hybrid seeds. The producers in Saranda and Divjaka also use thermal plastic sheets (mulch) which also promotes faster growth and thereby earlier harvest. Irrigation is a problematic issue for all producers. In the Lushnja and Divjaka areas, most farmers have drilled their own wells while in the Saranda area the growers irrigate from a drainage channel, but both must pay the fuel expenses for pumping the water. In the North, producers irrigate from irrigation canals by gravity and purchase water from the state.

<sup>12</sup> Dhimiter Kote, Head of the Commune, Mursi.

<sup>13</sup> Kafarai, Fier watermelon producers.

<sup>14</sup> Hysen Guqta, MoAFCP.

**TABLE 5: COSTS OF PRODUCTION FOR 1 HA**

DESCRIPTION	Watermelon grower from Lezha (Torrovica) / North-west	Watermelon grower from Lushnja (Divjaka) - Middle-west	Watermelon grower from Saranda (Xarra) - South-west
Plantation technology	Seeds	Grafted seedling	Grafted seedling
Seeds/ seedling expenses	9,143	200,000	200,000
Rent of land	25,000	50,000	20,000
Chemicals costs	6,500	18,950	21,400
Fertilizers costs	20,857	59,000	84,800
Irrigation costs	15,714	22,000	55,000
Mechanical expenses	24,000	22,000	33,000
Plastic cover	0	75,000	46,800
Transp. cost	20,000	3,500	2,200
Yield/kg	25,000	60,000	60,000
Cost/kg	7.6	12.4	10.8
Sale price, lek/kg	11	22	13
Harvesting period	Jul.25	May.25	June.5

A large number of producers, including some commercial producers, with whom the authors spoke, have not calculated their costs of production and do not know their break even price. There is a clear need for farm management training that includes procedures for identifying technical and economic constraints on the farm, calculating production costs, break even analysis, and general skills in farm planning and management to assist farmers to respond to new market opportunities.

# WATERMELON VALUE CHAIN PARTICIPANTS

The value chain encompasses the full range of activities and services that are necessary to bring a product from its conception to final consumption. It is made up of a series of actors—from input suppliers to producers and processors to exporters and buyers. Value chain services, in turn, are the supporting activities that are sector specific, such as agricultural extension, and cross-cutting, such as finance and transport.

The following section walks through each function of the value chain, describing the major players, their characteristics, and the value added that each additional step provides. In the case of Albanian watermelons, the major functions include input suppliers, seedling suppliers, production, and buyers and traders. The primary value chain services available to Albanian melon producers include extension, finance, and transport. Services such as packing, packaging, and soil testing are extremely limited, and therefore not included in this value chain description.

## PARTICIPANTS AND FUNCTIONS

### INPUT SUPPLIERS

There are a few large input supply firms that import fertilizer, pesticides and other mechanical inputs and sell them directly to larger producers and to smaller agricultural distributors and supply stores. These large stores include Agrohelp, Agroblend and some larger members of Albanian Fertilizer and Agricultural-Input Dealers Association (AFADA). There are also integrated firms that supply inputs, seedlings and trade in watermelons, which are described below as integrated consolidators. The smaller agricultural supply stores vary in size from those in cities to those in small villages that sell directly to producers in volumes small enough for individual doses on small plots.

Input suppliers provide some services to producers including information and credit. They are the only source of agronomic information for most Albanian producers. The quality of information provided varies greatly and there is a strong belief among producers that the input suppliers recommend over-use of chemical inputs. Many of the input suppliers provide their products on credit to trusted clients and producers at zero interest. For many producers this is their only source of credit, although they often do not characterize it as such. Producers who prefer to purchase their inputs in Greece because of a perception of higher quality do not have access to this kind of credit, and instead purchase everything by cash.

### SEEDLING SUPPLIERS

Seedling suppliers are differentiated from input suppliers to capture the firms specializing in this key input in the watermelon sector. These seedling suppliers are largely vertically integrated, selling inputs while also producing seedlings for sale. While it is estimated that more than half of commercial producers grow their own seedlings, there is an increasing trend for those more commercial growers to purchase seedlings. In Mursi, a highly commercial watermelon production area near Saranda, 70 percent of producers buy seedlings versus 30 percent who produce their own.

There are three large watermelon seedling suppliers in Albania: Agroblend, Bruka Seedling, and AgroKoni.

Agroblend has been producing watermelon seedlings since 2003 and currently produces an average of 500-600,000 watermelon seedlings a year for the domestic and export markets. Agroblend services between 100 and 120 commercial producers, and in 2007 they exported 100,000 grafted seedlings to Kosovo. The planting density ranges from 4500 to 6000 per hectare. They currently supply mostly Crimson Sweet varieties and do not supply seedless watermelon seedlings. Agroblend provides training at the beginning of the season for the best watermelon producers in Divjaka, Saranda, and Lushnja - areas that currently produce over 100 hectares of watermelon. The training covers all aspects from soil preparation to harvest and their three full time extension agents follow up through farm visits.

Bruka Seedling is an integrated consolidator that produced 700,000 watermelon seedlings in 2007 including 100,000 seedlings for a producer in Macedonia. They primarily produce Crimson Sweet varieties including Crisby and sell the seedlings for \$0.57 per seedling while the cost of the seed is \$0.06 each and the rootstock, \$0.13 each.

AgroKoni is an integrated consolidator and is in the process of setting up a large seedling operation to enter the seedling supply business. It is expected to be online for the 2009 watermelon season.

There are also small seedling suppliers such as the Dupi brothers in Cherb who supply 12-16,000 seedlings per year for themselves and their neighbors. The Dupi brothers, like others, are considering specializing in seedling production. There are at least five small seedling suppliers in the key watermelon production areas. However, because these small nurseries can service 2 ha or less, they are at this time very minor players.

## PRODUCTION

There are two major types of watermelon producers: non-commercial and commercial growers. Non-commercial producers—making up approximately 80 percent of the production—utilize relatively low technologies, engage in spot market transactions, and are largely disorganized, with very few belonging to farmer groups. These farmers have on average .5 ha. They enter the market when they believe they can turn a profit, but are not committed watermelon producers.

Commercial watermelon producers tend to have larger areas under production than average in Albania. The largest producers have 30 hectares of watermelon in Berati or 20 hectares in Saranda. That said, Divjaka is an exception, as the commercial watermelon producers there tend to produce on smaller farms of a maximum size of 5 hectares and average size of one hectare. A few commercial producers who export to the EU do packaging of the product. For example, a Divjake producer is working on a shipment to the UK (ASDA, a subsidiary of Walmart), and has purchased some shipping containers from Croatia. Non-commercial producers do no product packaging. Neither commercial nor non-commercial producers do any pre-cooling, post-harvest handling or quality control. The AAC project's focus will be on commercial growers, and the number of those growers is increasing.

Until recently, there was little collaboration among producers, but in the past few years there has been an emergence of nascent watermelon producer groups. Information on some of these groups can be found in Table 6. Two of these producer groups are linked to a buyer that provides them with services including agronomic advice, marketing, and finance.

**TABLE 6: WATERMELON PRODUCER GROUPS**

Name	Location	No. Of Producers	Size	Buyer Link
N/A	Lezhe	25	2-5 ha each	Jahja
Adriatic	Divjaka	18	1 ha each	N/A
Divjaka 2007	Divjaka	13	2 ha each	Bruka

Kafarai	Fier	20+	5-10 ha each	N/A
N/A	Goriçan	7+	10-12 ha each	N/A
N/A	Mursi & Xara	18	8-20 ha each	N/A

## TRADERS/BUYERS

Currently consolidation in the watermelon value chain takes place at the trader level and so these traders are commonly called consolidators. There are several categories of traders: small traders, integrated consolidators, regional importers and European importers.

The majority of watermelon trade in Albania goes through small traders who buy directly from producers in the field or from wholesale markets and sell in wholesale markets, directly to retail, to other traders, or export regionally. These small traders operate on an opportunistic basis and are generally not specialized in any one product. They do not have established relationships with given producers and conduct most of their business through spot buying and selling.

There are currently two integrated consolidators in the watermelon sector: AgroKoni, Bruka Seedling. Integrated consolidators are engaged at more than one level of the chain and while none of them are engaged in production, they generally have established relationships with producers and provide them with services.

AgroKoni based in Durres provides inputs on credit at the beginning of the season to his key producers. He conducts his own field trials every year with imported seeds from Israel, and advises producers on what to grow. He has relationships with contract producers in each of the major production areas with whom he communicates to determine when the product is ready to buy.

Bruka Seedling based in Divjaka produces seedlings and exports watermelons and other horticultural products. In 2007, he helped to form a cooperative of the best producers in Divjaka and he provides them with technical training through his full-time agronomist and a reliable market for their produce. Bruka focuses on the export market and in 2007 he exported 45 trucks, equaling 990 MT, to the Balkans (mostly to Serbia).

There are other traders that are beginning to see the benefits of investing upstream in production in order to improve the quality and quantity of the production available for their trade.

Spahi Jahja is a former importer/exporter based in Lezhe who started exporting watermelon in 2006, exporting 80 MT of watermelon bought in Divjaka, Lushnja and Lezhe and sold to Bulgaria and Kosovo. Jahja focuses on regional exports and has strong relationships with brokers in the Balkans. He has a collection point where producers deliver their melons and he can then re-sort for export. Jahja worked with a producer group in 2007 and had a verbal contract to buy at for \$0.11 per kg, but when Jahja arrived in field with trucks, the producers demanded \$0.18 per kg. The trucks left empty. The problem of verbal contract enforcement is further explored in sections 5 and 7 below under Constraints and Interventions.

ARIS is based in Xara in the Saranda area and focuses on exporting melons. ARIS provides advice to the producers on what varieties to produce, marketing and previously worked with EUREPGAP certified producers. The company exported approximately 800 tons in 2007, valuing \$80,000.

Eqrem Ismailaj in Berati provides one example. He is an input supplier who provides producers with inputs on credit and has started trading in watermelon, buying the product from his input clients.

Regional importers are traders from other Balkan countries who come to Albania to buy watermelon directly from the producers or from the wholesale markets and export it back to their home country or to re-export it to other countries. There are many traders from Kosovo who fill this role, but also from other parts of the Balkans. In years of low supply there are many more regional importers coming into Albania. Even though the grower often sells to the same buyer, year after year, it is generally perceived that these traders do not pay the producers a fair price. European importers are looking for a high-quality product and do not want to work directly with the producers. They look for a local trader to consolidate the produce in Albania and manage logistical issues in country. While there is currently very little trade to Western Europe, the importers that are interested in watermelon in Albania generally work with the integrated consolidators.

## **VALUE CHAIN SERVICES**

Key services to the watermelon value chain include finance, extension and transport. Some of these services are embedded within the value chain and provided by one of the value chain actors, but this is not always the case. There are currently no services offered in-country for packaging or packing. While soil testing is available at National Laboratory, it is not widely used by growers.

### **Finance**

The most common forms of finance for watermelon producers are informal credit offered by input suppliers who provide the producers with inputs at the beginning of the season and collect payment after harvest, with no interest charged. This finance is only offered to preferred customers who are known to the input dealer and is not available to producers who opt to purchase inputs in Greece.

There are several financial institutions that offer services to watermelon value chain actors. These include Agricultural Credit Unions; Raiffeisen Bank, which is increasingly interested in the agricultural sector; World Vision, which is providing credit to producers in Lezhe through the microfinance institution Building Futures/Vision Fund Albania; and Opportunity Albania, which provides finance and technical advice to producers.

## **EXTENSION**

The three most common sources of technical information cited by producers are through relatives working in Greece, from their input suppliers, and from integrated consolidators. Many questioned the quality of the information from input suppliers, given their incentives to promote the use of pesticides and fertilizers. That said, Agrobland has three extension agents that work exclusively with producers and train in all aspects of production. Some integrated consolidators such as Bruka Seedling already have full-time extension agents on their staff to work with their suppliers; other consolidators are considering providing this service.

While the MoAFCP has a broad network of extension agents, most producers interviewed for this study could not name their local MoAFCP extension agent. There are exceptions such as in Lezhe where the Ministry is engaged with producers. However, resources are scarce, as one extension agent covers 3-4,000 hectares of farmland (watermelon as well as all other production).

## **TRANSPORT**

While some producers, traders and consolidators have their own transport, not all do and this has been a constraint in watermelon export. There are local transport companies but they are often very busy during the height of the season. Forward planning is required to secure transport well before harvest.

# WATERMELON VALUE CHAIN

Two distinct channels have been identified within the Albanian watermelon value chain as depicted in Figure 1 and described below. The primary differentiating factors between Channels 1 and 2 are the presence of integrated consolidators and of a small number of producer groups in Channel 2, who serve to organize the chain and sell to domestic, regional, and western European markets. Channel 2 is therefore tightly vertically integrated, while Channel 1 is fragmented, relying heavily on spot transactions and opportunistic selling. This is a simplification of complex relationships between buyers and sellers of watermelon in Albania that serves to provide watermelon value chain actors with a better understanding of the key intervention points.

## **CHANNEL 1: SMALL TRADERS SPOT BUYING AND SELLING FROM FRAGMENTED PRODUCERS**

It is estimated that 80 percent of Albanian watermelons are bought directly from producers by traders who then sell them on the wholesale market, to other traders, or directly to retail. These watermelons are most often bought from producers in the fields, who wait for traders to come to them at harvest time. Producers then compete against each other for buyers and drive down the prices. There is usually no established relationship between the producer and the trader or commitment to buy before the point of sale. While there are some nascent producer groups in this channel, the chain is still highly fragmented and consolidation in this channel takes place at the trader level. There is relatively little marketing strategy at any level of this channel and the marketing is characterized by spot buying. While value chain actors are aware of the size of watermelon demanded by the different end markets, there is no forward planning to target a specific market and plant an appropriate melon variety for that market. In other words, the chain is not driven by market demand.

This channel is highly inefficient due to the high transaction costs involved in consolidating volume from a large number of unorganized producers, the asymmetrical availability of information and the lack of a marketing strategy. This channel should shrink as the producers and traders become more commercially oriented.

## **CHANNEL 2: INTEGRATED CONSOLIDATORS WORK WITH COMMERCIAL PRODUCERS**

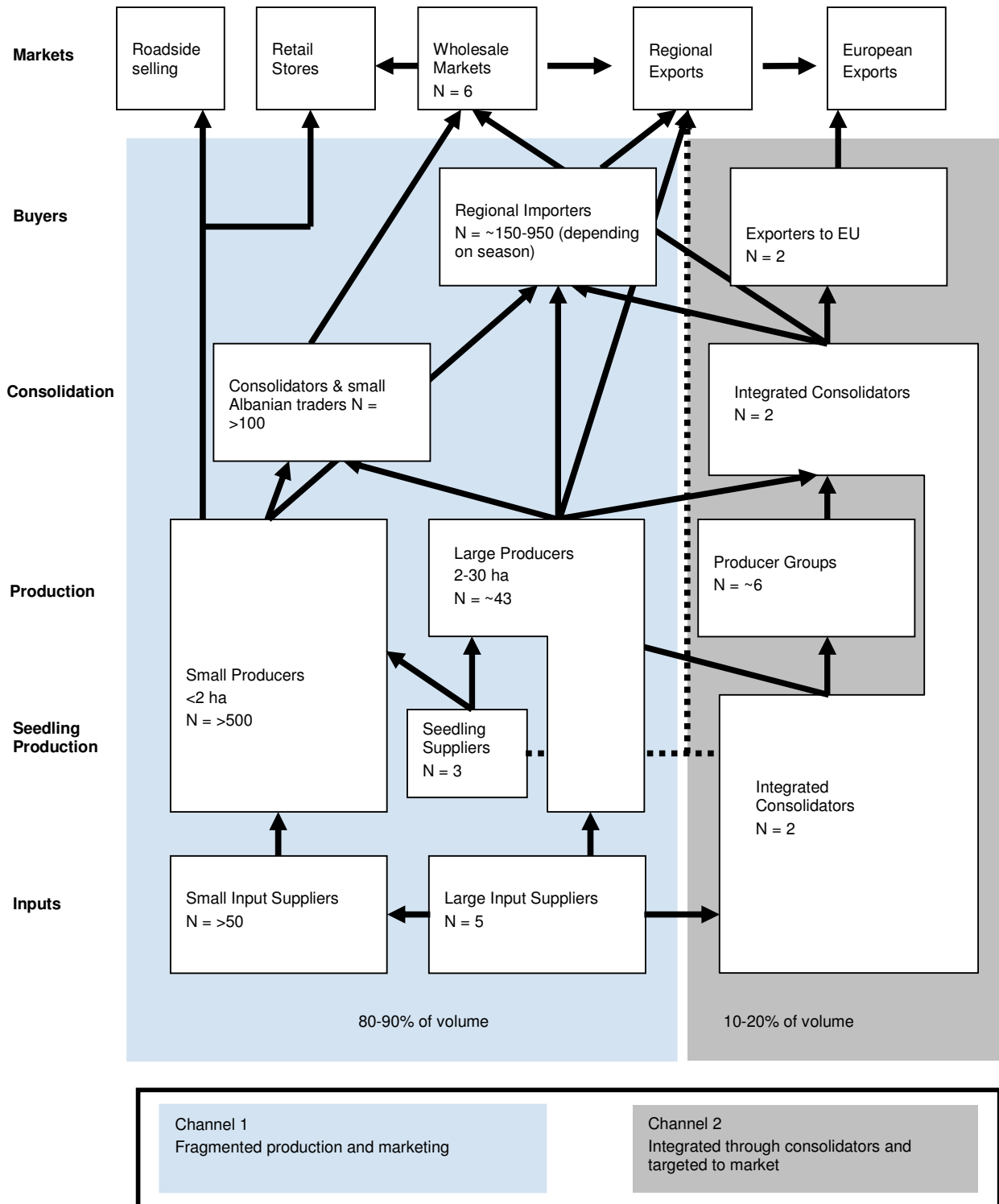
Channel two is dominated by the two integrated consolidators who are active in multiple functions of the value chain and provide embedded services to other actors in the chain. This channel is generally characterized by more commercial and larger producers who have established relationships with the integrated consolidators. Ideally the decision of variety selection is driven by the consolidator who notifies the producers of what to plant for the targeted market.

The two integrated consolidators provide their producers with embedded services such as finance, technical advice, and a market link. They generally have relationships with producers, although the strength of those connections varies by the consolidator. Indications are that the main constraint is establishing stronger links with producers in order to gain access to a more consistent supply of high-quality produce. These consolidators have a general marketing strategy, but often the buyers are not identified until the season has begun. AgroKoni, for example, indicated a need for stronger market linkages.

This channel has high potential, as there are opportunities for farmers to increase production of premium personal sized, seedless and earlier variety melons in response to market demand. There is a need to strengthen consolidation at the producer level, identify a marketing strategy, make available market information, and to create linkages between producers and integrated consolidators.



**FIGURE 1: ALBANIAN MELON VALUE CHAIN**





# DRIVING FORCES ON THE WATERMELON SECTOR

The watermelon sector is undergoing significant changes. With advances in infrastructure, the increased sophistication of buyers, the expansion of supermarkets, and increased consolidation of buyers both within and outside of Albania, smallholder non-commercial farmers are being squeezed out of the sector. Over time, commercial producers will grow in market share, and one can expect to see the total overall number of producers in the sector decrease, with a move towards larger, more efficient growers and integrated operations. The following provides details on the dynamics of the watermelon sector, and what is driving these changes in Albania and in export markets.

- **Improved infrastructure**—including roads, communication, and market information in the form of privatized industry websites—are developing rapidly. This improved infrastructure in Albania and the Balkan region will likely result in some of the most dramatic changes in the fresh and processed industries. It will serve to expedite the movement of products, thereby increasing market competition and product diversity; it will reduce costs and improve efficiencies of processes; and will augment alliances between regions that offer comparative advantages.
- **Buyer sophistication and demands are increasing.** Buyers in the EU require various certifications from suppliers, such as GLOBALGAP, ISO, HACCP, and this certification process is now creeping into the Balkans. Within the next five years, as the Albanian supermarket chains develop, we can expect to see more of the domestic Albanian supermarkets requiring similar certification. Additionally, better packaging, product identification and traceability that is required by company buyers in the EU is also now developing in the Balkans. For example, Kosovo middlemen buyers are now requesting watermelon in bins, whereas previously bulk truckloads were acceptable. Finally, there is increasing demand from buyers to work only with suppliers who have traceability systems. These trends require more sophisticated production, farm management, and marketing skills, which will serve to squeeze out less commercial producers.
- **The expansion of supermarkets in Albania and the region.** Though currently the volume is minor, supermarkets will gradually command a greater market share of fresh and processed vegetables in the future. Only growers and distributors who employ more sophisticated systems will be able to supply and meet supermarket needs. This will further serve to increase market share of commercial producers.
- **Strong and growing market demand in the CEE and Europe.** Several EU buyers have expressed interest in developing long term partnerships and investments with Albanian suppliers. There are no tariff or trade requirements hampering foreign demand for Albanian melons. The best Albanian distributors, however, are not yet prepared to develop these valuable partnerships due to poor marketing and sales knowledge, inefficient operations, and a lack of familiarity with distant foreign markets. In order to avail themselves of these market opportunities in the CEE and Europe, the consolidators and distributors will need to respond to these more exacting requirements.
- **Slow, yet increasing awareness of the need for better market information.** Farmers and consolidators are gradually seeing the need for accurate and timely market information. For example, the AAC project has been working with Green Market, a private market information website, which recently started in Albania. AAC plans to utilize Green Market as a partner, along with the Ministry of Agriculture, in the development of a sustainable Market Information System.

With greater awareness for the need for market information, and a growing supply of such services, commercial growers should be in a stronger position to make production and marketing decisions based on analyses of market trends. Those who successfully do so can expect their market share to increase.

# THE VISION FOR THE WATERMELON SECTOR IN 2012

Through working with watermelon value chain stakeholders, a new vision for the sector has emerged. As the domestic market is becoming saturated, expanding market opportunities will have to come from regional and EU exports which will necessitate a more integrated and consolidated chain, led by integrated consolidators. In order to achieve this vision, AAC has helped to establish these goals:

- Increase the volume of exports beyond the total of 4,155 MT of 2007.
- Increase the proportion of exports captured by Albanian firms by ensuring that more exports are led by Albanian traders rather than regional importers and that instead of re-exported Albanian products, Albania is selling into the end market.
- Increase the volume of watermelon production going through integrated consolidators.



# WATERMELON VALUE CHAIN INTERVENTIONS

This section describes the first year AAC interventions that will help to move the watermelon value chain towards the vision created above. These activities will be updated annually during the annual CDP revision which will identify new gaps and activities to reach the watermelon value chain goals. These activities are those that are specific to the watermelon sector. Some issues that were raised including land tenure issues and market information will be addressed by activities that cut across all value chains and are described in the AAC Annual Workplan.

All AAC activities will be demand driven. All products must be grown to meet present and potential buyer specifications, and both growers and buyers need assistance facilitating first rounds of negotiations to develop trust and strong market linkages over time. The recommendations which follow therefore begin with identifying buyers and understanding market demands, and then move backward to assisting consolidators and exporters to strengthen their business operations, and finally working with farmers to produce those products demanded by target markets.

## ACTIVITY 1: IDENTIFY AND FACILITATE ACCESS TO NEW MARKET OPPORTUNITIES

**Constraint:** Almost all value chain actors indicated that their major problem is identifying buyers and establishing relationships with buyers. In order to compete in the export markets, producers will need to meet stringent, higher standards, and to establish relationships with new buyers.

**Opportunity:** Regional and EU export markets present real opportunities for Albanian melons. While the market entry requirements and logistics are more complex the regional markets, Albania has already successfully exported to Greece, Italy, Switzerland, and the Netherlands.

**Objective:** To increase the volume and value of watermelon sales by identifying new market opportunities and establishing relationships with new buyers.

**Activity Description:** The AAC Value Chain Team will identify new market opportunities and facilitate business to business contacts to enable Albanian firms to access new markets. Potential markets include the tourism sector in Albania and the region, supermarket chains in Albania and in the region, and other niche markets in the EU for seedling, small or GLOBALGAP certified melons in the regional and European markets. AAC will build on the EDEM buyer's network to include new buyers such as those identified by DAI's USAID programs in Serbia and Croatia, and new buyers identified through attending trade fairs and drawing on the AAC team's personal contacts.

**Location:** Saranda, Divjaka, Lushnja, Fier, Berat, Lezhe.

**Activities:**

	Organize B2B meetings in cooperation with the RCI to assist consolidators and distributors to identify new buyers and new markets	
	Introduce EU Grades and Standards for Watermelon	
	Identify transportation links to regional and EU Markets	
	Identify sources of packaging materials for regional and EU shipments	

## ACTIVITY 2: STRENGTHEN MARKET LINKAGES BETWEEN PRODUCERS AND CONSOLIDATORS

**Constraint:** Today most transactions in the watermelon value chain are based on spot market opportunities with few established relationships between different value chain actors. As a result, producers and traders both have problems getting the other side to abide by verbal contracts.

**Opportunity:** There are a small number of consolidators who are serving to coordinate the value chain from inputs to final sale. This has led to greater efficiencies and higher profits along the chain. Linking more farmers into more tightly integrated channels offers opportunities to increase incomes and both on- and off-farm jobs. In order to accomplish the shift to a more integrated market-driven chain, market linkages need to be strengthened. Interactions between buyers and sellers in the value chain need to develop into established relationships with both sides meeting the established agreements. This is true of the relationships between producers and integrated consolidators as well as the relationships between integrated consolidators and their buyers.

**Objective:** To strengthen the relationships between producers and consolidators and consolidators and their buyers.

**Activity Description:** The AAC Market Linkages Specialists will work to introduce potential buyers, consolidators, and producers at the beginning of the season. AAC will facilitate business to business connections to give buyers the opportunity to show consolidators and producers what they need. AAC will assist value chain actors to ensure that those needs are met and trust is established so that relationships can develop.

**Activities:**

	Organize regional meetings between producers, consolidators and potential buyers at the beginning of the season	
	Organize and facilitate inward buying missions	
	Organize and provide cost share grants for trips to meet specific buyers	
	Help clients in negotiations with buyers	
	Support consolidators in providing packaging and post harvest procedures to meet buyer requirements	
	Market Information Training Programs on buyer and consumer requirements	
	Facilitate establishment of watermelon producer organizations	
	Technical Support and cost –share grants for the set-up of regional consolidation centers	
	Conduct a transportation study for links to regional and EU markets	



### ACTIVITY 3: WORK WITH PRODUCERS, CONSOLIDATORS, AND EXPORTERS TO ENSURE VARIETY SELECTION IS MARKET DRIVEN

**Constraint:** Many producers make their variety selection decisions based primarily on which varieties are the most high-yielding or based on what is grown in Greece, with very little attention paid to the end market characteristic demands. Similarly, consolidators and exporters at times do not analyze market demand when telling farmers what to grow.

**Opportunity:** Demand for watermelon in the European market has shifted over the last decade from large picnic watermelons to small seedless watermelons. There are now two integrated consolidators, Bruka and AgroKoni, in the seedling business who are well-positioned to communicate the end market’s variety preferences to the producers and ensure that adequate seedlings in those varieties are available. These consolidators will need assistance in analyzing market demand when making their production recommendations, and AAC will need to identify other businesses interested in becoming consolidators to expand market opportunities for smallholders. The project will also need to assist other producers not closely associated with these two integrated consolidators who still need information to help make this critical decision.

**Objective:** To reorient producers’ and consolidators’ decisions on variety selection to be market-driven as well as based on agronomic conditions.

**Activity Description:** The Regional Market Linkage Specialists will facilitate discussion between consolidators, seedling suppliers, and producers to ensure that the seedling suppliers have information on which varieties producers will be asking for in order to meet the demands of the market. AAC will provide market analysis training to consolidators, exporters, and input suppliers to assist them in communicating market demand to growers. AAC will also sponsor demonstration trials of seedless varieties in Saranda, Lushnje and Berat.

**Location:** Saranda, Divjaka, Lushnja, Fier, Berat, Lezhe.

**Activities:**

	Provide cost-share grants to Bruka and AgroKoni to sponsor variety demonstration trials for seedless and “personal” sized watermelon	
	Provide cost-share grants for technology trials that induce early harvest	
	Prepare and disseminate market studies for target markets	
	Organize workshops and field to introduce advanced watermelon production techniques and disseminate results of 2008 trials	

### ACTIVITY 4: PRODUCER ASSOCIATION DEVELOPMENT

**Constraint:** Land & producer fragmentation – The average farm size in Albania is 1.1 hectares divided into four plots. While there is no data available specifically for watermelon production, farm size is not expected to be much larger than average. This results in high fragmentation of production and high transaction costs, as it is difficult for buyers to consolidate the high volumes required by their markets from many small producers. The more stringent quantity and quality demands of higher value markets will place greater emphasis on consolidated production.

**Opportunity:** Horizontal coordination – Albanian producers are slowly recognizing the value of working together in producer groups to strengthen their market power. These producer groups are able

to buy inputs in bulk, engage in group marketing arrangements with traders, and maintain a higher percentage of the overall sale price at the farm level.

**Objective:** Consolidate watermelons at the producer level reducing costs of production, marketing transaction costs, and opening new marketing opportunities.

**Activity Description:** The AAC Association Development Specialist (ADS) (or the Production Specialist before the ADS joins the team in year two) will lead the strengthening of nascent watermelon producer groups by ensuring that appropriate market-driven financial incentives are in place and then helping to improve the management capacity of the group. The ADS will be supported by the Agricultural Outreach Officers and the Regional Market Linkages Specialists.

**Location:** Saranda, Divjaka, Lushnja, Fier, Berat, Lezhe.

**Activities:**

	Conduct workshops on the benefits of forming registered producer associations and assist groups in performing the steps required	
	Support producer groups by helping the develop services that they can provide to their members including collective purchasing of inputs, market information and market linkages	
	Build the internal capacity for producer associations such as developing by-laws, articles of incorporation, management and organization development, financial management, contract management, etc.	

## ACTIVITY 5: AGRONOMIC CAPACITY BUILDING AT FARM LEVEL

**Constraints:** The agronomic capacity of Albanian watermelon producers varies widely by geographic region. In the northern regions in particular, production is mostly in open field, with very little improved practices employed. While soil testing is available at National Laboratory, it is not widely used by growers. A number of pests and diseases affect the productivity of the watermelon crops, in Saranda producers lose the first flowering and so lose the earliest and highest value production, and many producers also complain about seed quality, although this is likely an indication of other problems including soil parasites, variety selection, and pairing of melon and squash varieties for grafting.

**Opportunities:** In the southern and central regions, the technical capacity of lead producers is generally high, with adoption of many technologies that improve productivity. There are opportunities to extend this technology and technical know-how to the northern parts of Albania, and to introduce new technologies such as soil sampling and post-harvest handling to further improve productivity and add value.

**Objective:** Improve productivity of watermelon production at the farm level and reduce costs of production.

**Activity Description:** AAC will implement targeted activities to build the agronomic capacity of producers through workshops, on-farm training, and field demonstrations. The demonstrations will be overseen by the Agricultural Outreach Officers. Wherever possible, we will work through partner organizations to directly provide these services, or will build the capacity of partners to do so. Potential partners include public extension services of the MoAFCP and the TTCs; and private extension including through Bruka, Agroblend, Jahja, and Opportunity Albania, among others.

In the southern and central regions where agronomic capacity is relatively high the Agronomic Outreach officers will focus on solutions to specific issues being faced by producers. AAC will

concentrate efforts in the North on introducing technologies and bringing their production techniques in-line with the rest of the country. Monthly training workshops with lead producers will be held to provide solutions to their agronomic constraints. These workshops will be strengthened by on-farm training and demonstrations. Specific issues which will be addressed by workshops and demonstrations in the South and Center include:

**Location:** Saranda, Divjaka, Lushnja, Fier, Berat, Lezhe.

**Activities:**

	Work with input suppliers to train producers in the use of soil testing kits to determine fertilizer recommendations	
	Work with input suppliers to provide environmentally sound solutions to pests and disease problems identified by producers	
	Conduct workshops for extending the growing season	
	Conduct Study tours for producers in the North to visit more advanced producers in the southern regions	
	Conduct training and workshops in farm record keeping, determining costs of production, farm management, business planning, etc.	

## ACTIVITY 6: IMPROVE POST-HARVEST MANAGEMENT

**Constraint:** In order to meet the demands of the export market, adequate facilities for sorting and packaging are essential. These facilities are currently lacking in the watermelon value chain. To date, the impact has not been dramatic as the market has been growing to where this is now essential.

**Opportunity:** Some lead farmers in the south are recognizing the need for improved post-harvest management. They are ready to make the changes needed—including investments—with proper advice and guidance.

**Objective:** To open new market opportunities by enabling the Albanian value chain to meet the packaging and grading requirements of the end market.

**Activity Description:** The AAC Marketing Specialist will identify Albanian integrated exporters interested in establishing a packhouse for watermelons. The AAC team will develop a business plan for a packhouse and determine its financial viability. AAC will help facilitate access to finance, and if necessary may provide an incentive grant to stimulate investment in this key gap in the chain. AAC will also work with the businesses to ensure that relationships with producers are established to supply the packhouse with an adequate volume and quality of melons of the variety demanded by the end market.

**Activities:**

	Prepare and disseminate protocol for proper post harvest handling of watermelon	
	Prepare business plan for packhouse/precooling facility for export watermelon	
	Conduct workshops for traceability procedures for watermelons.	
	Introduce EU sorting and sizing standards for watermelons	