

AGRO INVESTMENT GUIDE

A R M E N I A



AGRO

INVESTMENT

GUIDE

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THE MINISTRY OF AGRICULTURE
OF THE REPUBLIC OF ARMENIA



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WHY INVEST IN ARMENIA

Mild tax regime, a gateway to the Eurasian Economic Union market, and great potential for organic and high value added product development make Armenian agriculture a very attractive industry for foreign investments.

COMPETITIVE ADVANTAGES

- **Strategic location** that connects Europe, Asia, the CIS countries, and the Middle East
- Continuously **improving investment climate** that is favorable for foreign investments and provides protection against adverse changes in legislation
- Advantageous **trade regulations**, including free trade regime and no export duties
- Well educated, **young**, and **inexpensive** workforce
- Established technology-oriented economy with a focus on high quality products
- Access to a world market through Diaspora members scattered all over the world.

E C O N O M I C S U M M A R Y

KEY INDICATORS:

GDP 2014:

USD 11.7 billion / AMD 4,843 billion



FIGURE 1:

Nominal GDP Dynamics in Armenia;
2009-2014 (billion USD)

■ Gross Domestic Product
○ GDP Growth (%)

MAIN SECTORS:

Agriculture is the second largest sector of the economy after Services. In 2014 Agriculture accounted for 20% of the GDP.

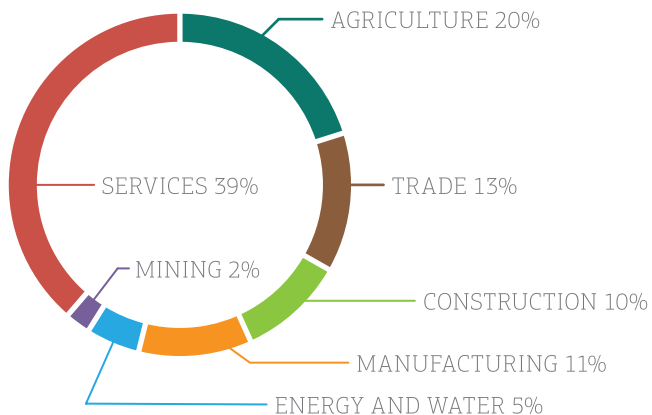


FIGURE 2:

GDP by Sectors of Economy; 2014 (%)

COMPETITIVE TAXATION SCHEME:

- Simplified taxation for Small Enterprises.
- 3 year VAT delay for imported industrial equipment.
- Enterprises relieved from Social Security payments for their employees.
- Tax advantages for large exporters. The profit tax for exporters is reduced 10 fold if the export volumes are over 50bln drams (about \$105mln), and 4 fold if the export volumes range from 40 to 50 bln drams (from about \$84mln to about \$105mln).



FOREIGN INVESTMENTS:

• TOP INVESTOR COUNTRIES:

Russia, Argentina, France, Germany, USA

• FREE ECONOMIC ZONES (FEZ):

Armenia has exemption of profit tax, income tax, value added tax, property tax and customs duty.

- First FEZ “**Meridian**” was established in the center of Yerevan for jewelry, diamond cutting and watch making.
- The second FEZ “**Mars**” (**industry and high tech**) is targeting innovative products. It was established with the Mars Closed Joint-Stock Company in 2013.
- The third FEZ was launched in Gyumri (**Technopark**) in 2014.
- The fourth FEZ for the agribusiness sector is expected to be initiated near Zvartnots airport.

A R M E N I A I N C O M P A R I S O N



DOING BUSINESS 2015:

RANK FOR ARMENIA:

45th out of 189 countries; 7th in Europe and Central Asia.

Armenia is among the countries that have:

- eliminated the minimum capital requirement for registering a business.
- eliminated the social tax that was attributable to employers (around 24% of the gross salary for each employee).
- introduced one unified tax instead of income tax and social security payments.
- simplified the business registration process.

INDEX OF ECONOMIC FREEDOM:

RANK FOR ARMENIA:

52 out of 178 countries;

Armenia has the highest ranking for Economic Freedom among CIS countries.

INVESTING ACROSS BORDERS:

The Government of Armenia adopted a strategy of encouraging foreign investment in the country and has designed all policies accordingly.

• Investing Across Sectors:

There are no restrictions on foreign equity ownership, except for partial limitation (no more than 49%) for the oil and gas and transport sectors, as well as restrictions in the forestry sector.

• Starting a Foreign Business:

Ease of establishment index 78.9 out of 100. It takes 8 procedures and about two weeks to establish a foreign-owned limited liability company (LLC) in Armenia.

• Accessing Industrial Land:

Leasing and buying land from both private and public owners is possible. There are no restrictions on the amount of land to be leased.

• Arbitrating Commercial Disputes:

All commercial disputes are arbitrable except intra-company and patent or trademark disputes. Parties can choose arbitrators of any nationality and are free to appoint foreign lawyers to represent them in Armenia.



INTERNATIONAL ORGANIZATIONS MEMBERSHIP

Armenia is a member of the following major international organizations:

ADB (since 2005)	ILO (since 1992)	WCO (since 1992)
BSEC (since 2012)	IMF (since 1992)	WHO (since 1992)
EBRD (since 1992)	ITU (since 1992)	WIPO (since 1993)
EDB (since 2009)	UN (since 1992)	WTO (since 2003)

MARKET ACCESS:

- **Eurasian Economic Union (EEU):** The implication of Armenia joining the EEU in 2015 is that Armenian food processors and producers should follow unified certification procedures for products targeted for export to the EEU countries, which provides access to a market of more than 182 million people.
- **General System of Preferences (GSP+)** trade regime with the EU: 6,400 products exported with zero or reduced customs duties.
- **General System of Preferences** with the USA, Canada, Switzerland, Japan and Norway.
- No customs duties for all agricultural and industrial products with few exceptions (under Armenia-EU DCFTA negotiations).
- **US Trade Agreement:** Trade and Investment Framework Agreement between the Government of the United States of America and the Government of the Republic of Armenia. This agreement establishes a United States-Armenia Council on Trade and Investment.
- **Free trade agreement with Georgia and CIS countries.**





WHY AGRI- CULTURE

SECTOR ADVANTAGES

- Highly fertile soils, clean water and favorable climate.
- Strong support from the Government to attract FDI in the agribusiness sector.
- Steady increase in share of agricultural products within total exports.
- Tax advantages for primary agricultural producers.
- Favorable conditions for organic production.
- Unused technological and area potential.
- National brand recognition in CIS countries.
- Comparably high return on investments within the sector.
- Excellent taste and high quality of the produce.

S E C T O R O U T L O O K

KEY INDICATORS:

AGRICULTURE OUTPUT:

AMD 993.4 billion or USD 2.1 billion, and 20% contribution to the country GDP.

AGRICULTURE OUTPUT STRUCTURE 2014:

Plant Growing 61%, Animal Husbandry 39%

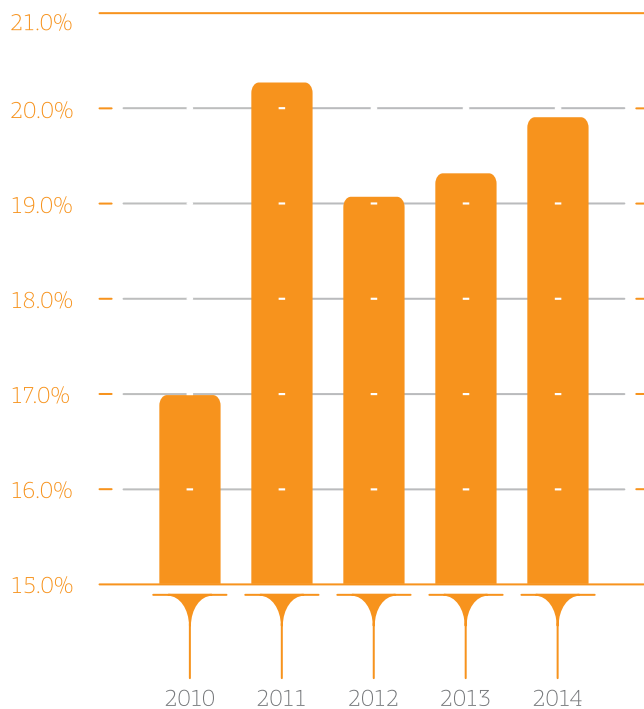


FIGURE 3:

■ Agricultural Output Dynamics;
2010-2014 (% of GDP)

FOREIGN TRADE:

Agri-food exports in 2014 were USD 414 mln. or 27.8% of total exports.

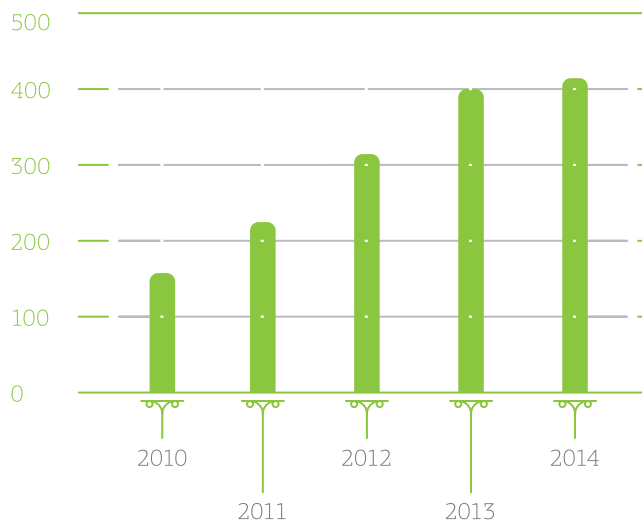


FIGURE 4:

■ Agri-Food Export Dynamics;
2010-2014 (mln. USD)

FOREIGN INVESTMENT IN AGRICULTURE:

Investment in Agricultural activities:
USD 41.4 mln. which was 7% of total investment in 2013.



ORGANIC MARKET

Organic agriculture development is among the priorities of the Government of Armenia. The growing market for organic produce and the existence of a certification body make organic production more profitable and accessible. As of 2014 there are 1,100 hectares of organically certified areas in Armenia, including arable land and wild collection areas. The highest demand for organic produce is recorded in the production of fruits, berries, honey and herbal tea. Investment opportunities are tremendous in organic dried fruit, juices, dairy, and preserves production.



VINEYARDS

GENERAL OVERVIEW

Armenia is known as one of the oldest wine producing and grape cultivating countries in the world. This fact is supported by the recent discovery of the oldest known winery in the village of Areni. Ancient wine-making traditions and culture, as well as the high quality of brandy produced make investment in grape processing and cultivation very attractive.

There are over 70 varieties of vines in Armenia. It is believed that the ancient grape varieties are descended from wild to domestic species. Natural environmental conditions, heat, light, and ground salt favor the development of horticulture and grape growing in Armenia.

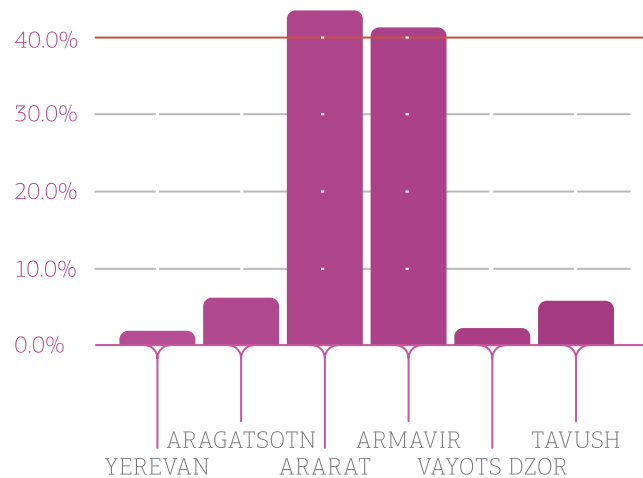


FIGURE 5:

Grape Production by Regions; 2014 (%)

G R A P E

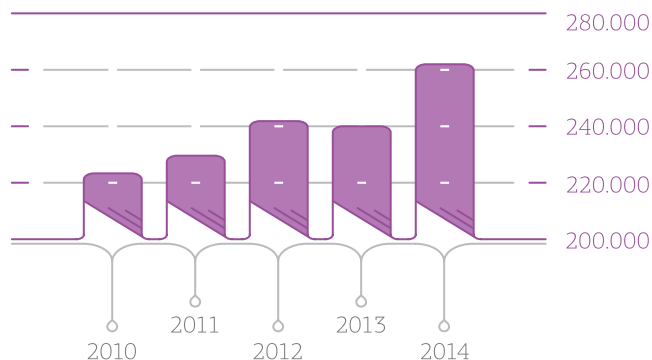
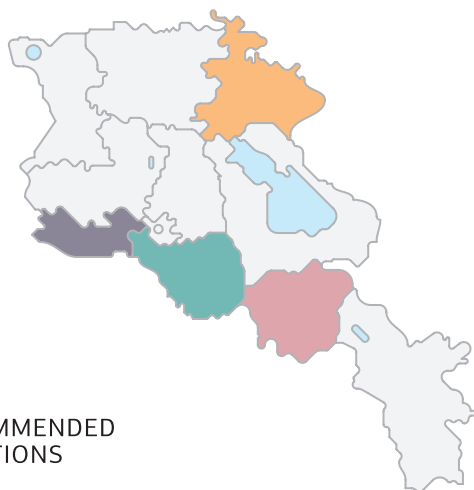


FIGURE 6:
Grape Harvest;
2010-2014 (tonnes)



RECOMMENDED LOCATIONS

- Ararat
- Armavir
- Vayots Dzor
- Tavush

POPULAR VARIETIES

The main grape varieties for winemaking and brandy production in Armenia are: Charentsi, Kakhét, Kangun, Karmrahut, Haghtanak, Meghrabuyr, Mskhali, Sev Areni, and Voskehat. The main types of wines are ordinary white and red wines, semisweet wines, and sparkling wines. The grape is consumed generally as a fresh fruit. The main grape cultivars of the country are Armenia, Ayvazyani Muskateni, Deghin Yerevani, Masis, Mskhali, Shakhumyani, Vani, and Vardaguyn Yerevani.

EXPORT:

During the recent years the main countries of grape export were Russia, Belarus, and Ukraine.

CONSUMPTION/ PROCESSING

Superiority of Armenian grape varieties ensures high quality brandy and wine production which are widely consumed not only in Armenia but in foreign countries as well. The dominant share of Armenian beverage exports (about 90%) comes from brandy.



SUCCESS STORY

GOLDEN GRAPE ARMAS

Golden Grape ArmAs was founded in 2007 by Armenak Aslanian, an Armenian entrepreneur, who repatriated to his motherland for the realization of goals that involve the intertwined aspects of family, heritage, culture, and progress. Primary goal was the establishment of full supply chain, starting from grape production to wine making. The total area of 180ha of land is mostly utilized in wine production (100ha), while the rest of the area is used as orchards (apricots, peaches, cherries, berries, and prunes), the space for the winery & distillery, the tasting room, the boutique hotel, and the lake.

Golden Grape ArmAs is a wonderful example of foreign investment in a promising agribusiness in Armenia that was destined to be successful.

FINANCIAL INFORMATION

INPUTS

CROP TYPE	YEREVANI (QISHMISH)
ANNUAL YIELD PER HECTARE, TONNES	10-15
PLANTS PER HECTARE	1,650
INVESTMENT PER HECTARE (CAPEX), USD	25,000 – 30 000
FIRST HARVEST TIME, MONTHS	36
RECOMMENDED SCALE (IN HECTARES)	5

OUTPUTS/ RATIOS

NPV, USD	240
IRR, %	20.21%
PAYBACK PERIOD, YEARS	6.44

NOTES:

1. Own wine production facilities may ensure higher efficiency.
2. Yerevani type has high export potential as table grape.
3. Yerevani is the best variety suitable for raisin manufacturing.
4. Among recommended technical varieties Kangoun, Haghtanak, Areni types can be mentioned.
5. Anti-hail system and drip irrigation systems costs are included in the calculations.
6. Discount Rate - 20%.





ORCHARDS

GENERAL OVERVIEW

Fruit growing is one of the leading sectors of Armenian agriculture. Differences in altitudes and climatic zoning of the country provide non-simultaneous ripening of fruits, which ensures a constant availability of fruit from late spring to late fall. Due to diverse elevations and differences in climate, special varieties of fruits have a unique taste and flavor, which make them famous not only in Armenia but also abroad. Armenia produces a number of fruits and nuts including apricot, peach, plum, sweet cherry, cherry, apple, pear, quince, walnut, fig, pomegranate, etc. Some types of fruit have traditionally a high demand on local and international markets. Therefore, the establishment of orchards can be competitive when the application of the latest modern technologies gives high yield and intensive varieties of plants, and the installation of drip irrigation systems and anti-hail nets minimizes weather-borne risks.

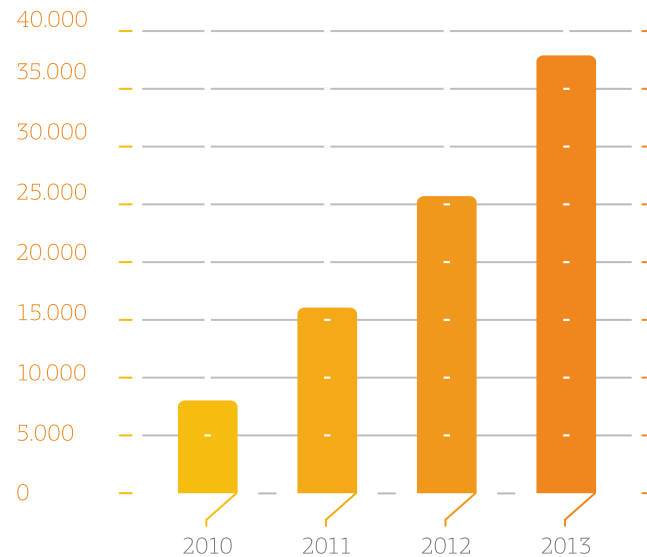


FIGURE 7:
Fruit Export;
2010-2013 (tonnes)

A P R I C O T

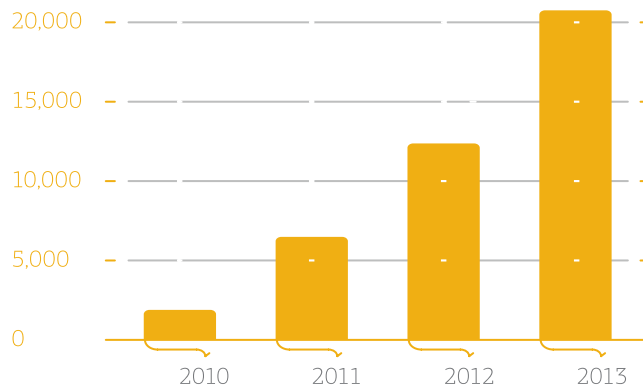
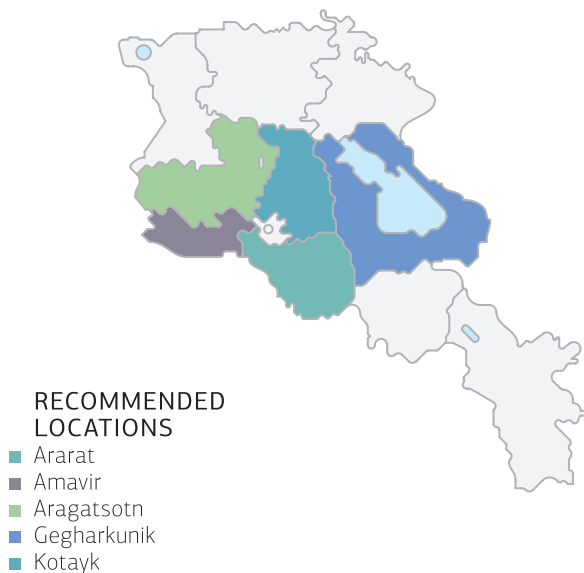


FIGURE 8:
Apricot Export; 2010-2013 (thousand USD)



GENERAL OVERVIEW

Apricot is rightfully considered to be the most famous Armenian fruit and the true symbol of the country. Apricots were growing in the Armenian Highlands 6-8 thousand years ago. This discovery is honoured by the scientific name of the apricot - *Prunus Armeniaca* (Armenian plum). The first apricots ripen in the Ararat Valley in late May and the harvesting ends in the basin of Lake Sevan in early September.

EXPORT

Apricot is the most exported fruit in Armenia. The main countries of export are Russia, Ukraine and Belarus; small quantities are also exported to the European Union countries.

CONSUMPTION/ PROCESSING

Most of the local companies use apricots for making jams, compotes and juices. Dried apricots are also very popular due to the ability of apricot to preserve the flavor of the sun and keep all the vitamins throughout the winter.



SUCCESS STORY

EUROTERM

Euroterm CJSC was established in 1998 and nowadays is one of the leading ISO 9001-2008 certified manufacturers of natural juices, nectars and drinks, as well as fruit preserves and canned vegetables in Armenia under NOYAN trademark. It is one of the few companies who could complete production technological cycle, i.e. from fruit production to processing and packaging. Since 2004 Euroterm CJSC has been heavily investing in primary production of agricultural goods, and today it has hundreds of hectares of vegetable gardens and fruit orchards, including peach, apricot, walnut, white cherry trees and grape vines. Recently the company acquired 900 ha of land in Armavir, where 250 ha are utilized under tomato production, and the rest is reserved for future investment.

POPULAR VARIETIES

About 80 varieties of apricots are actively cultivated in Armenia. The most demanded varieties are Yerevani (Shalakh), Sateni, and Spitak. In addition to traditional cultivation techniques, intensive methods can be used as well.

FINANCIAL INFORMATION

INPUTS

ANNUAL YIELD PER HECTARE, TONNES	25-30
PLANTS PER HECTARE	450-500
INVESTMENT PER HECTARE (CAPEX), USD	15,000-20,000
FIRST HARVEST TIME, MONTHS	48
RECOMMENDED SCALE (IN HECTARES)	3-5
VARIETIES AVAILABLE IN THE MARKET	YEREVANI (SHALAKH), SATENI, SPITAK.

OUTPUTS/ RATIOS

NPV, USD	2.407
IRR, %	22.29%
PAYBACK PERIOD, YEARS	5.01

NOTES:

1. Evrika variety is the one that can be adapted to Armenian climate. The tree needs 4-5 years to start giving fruit. Number of trees per hectare is about 450-500; yield per tree is close to 75-80 kg. Average yield is about 30-35 tonnes per hectare.
2. Technologies allowing early or late harvests could bring additional income of up to 200%.
3. Anti-hail system costs are considered in the calculations.
4. High export potential.
5. Discount Rate - 20%.

P E A C H

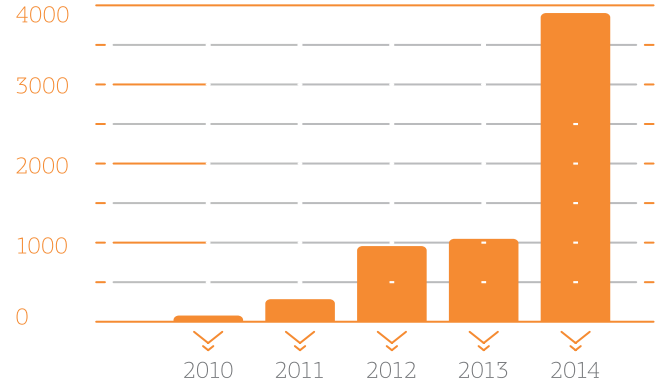


FIGURE 9:
Peach Export; 2010-2014 (thousand USD)



CONSUMPTION/ PROCESSING

Most of the local companies use peach for making jams, juices, dry fruit and compotes (stewed fruits).

GENERAL OVERVIEW

Apricot and peach make up about 78-80% of the total orchard area (34,780 ha). Armenian peach is among the agricultural commodities that are very competitive in foreign markets. Due to centuries of hard work, Armenian growers have created numerous varieties of peach with unique flavor and admirable taste. Some very famous varieties are Narnji (Orange), Laureat, Uspekh and Lodz. The most common cultivated varieties of peach in Armenia are saffron, lemon, orange, and chughuri. The existence of varieties that bear fruit from mid July to late October makes peach available for nearly two seasons.

EXPORT

The main countries for export are Russia and Ukraine. Recently, the Middle East and particularly the UAE market has been explored for peach exports. The latter is considered a highly attractive prospective market for the Armenian fruit.



FINANCIAL INFORMATION

INPUTS

ANNUAL YIELD PER HECTARE, TONNES	20-25
PLANTS PER HECTARE	600-800
INVESTMENT PER HECTARE (CAPEX), USD	15,000 – 20,000
FIRST HARVEST TIME, MONTHS	36
RECOMMENDED SCALE, HECTARES	3-5
VARIETIES AVAILABLE IN THE MARKET	NARNJI, LAUREAT
PLANT LIFE CYCLE, YEARS	15
MAXIMUM PRODUCTIVITY, YEARS	5

OUTPUTS/ RATIOS

NPV, USD	2,304
IRR, %	23.45%
PAYBACK PERIOD, YEARS	5.32

NOTES:

1. Intensive growing technology is being used in peach growing orchards.
2. Anti-hail system costs are considered in the calculations.
3. Discount Rate - 20%.





GREENHOUSE

GENERAL OVERVIEW

The greenhouse industry has been rapidly growing in Armenia for the last decade. Within 5 years more than 300 hectares of greenhouse area has been added. These are mainly large industrial greenhouses equipped with the newest technologies and know-how. The massive number of sunny days, sunlight intensity and sun radiation, complemented with the relatively low cost of energy and opportunities for alternative energy source utilization, create unique development perspectives for this sector. Not surprisingly in 2015 the total investment in greenhouses is estimated to be nearly \$50mln. Most greenhouses are constructed in Ararat, Armavir and Kotayk Marzes that are located close to the airport and central markets, which makes the produce distribution and transportation fairly easy. The produce from these greenhouses is mainly supplied to the local and Russian markets.

Fresh vegetables, flowers and berries can be exported all around the world. Armenian agricultural produce can especially benefit from exporting to Eurasian Economic Union and the CIS countries, where free trade rules are adopted and Armenian produce is traditionally associated with high quality and excellent flavor.



BERRIES

GENERAL OVERVIEW

The volume of berries production in Armenia was 13.5 thousand tonnes in 2013, which is nearly 2.5 times higher than that in 2005. This includes both wild and cultivated berries. The most popular crops in this group are raspberries, strawberries, and currants. As berries are considered among the high value added products, considerable investment has been made in berry production, especially in greenhouses. There is a great demand for berries from processing plants (for juices, jams, and preserves), as well as from the sellers of organic products both in Armenian and foreign markets. At the moment, there are several producers that export their production to the UAE by utilizing air transportation. In addition, some products are re-distributed from the UAE to the rest of the region through well established distribution networks.

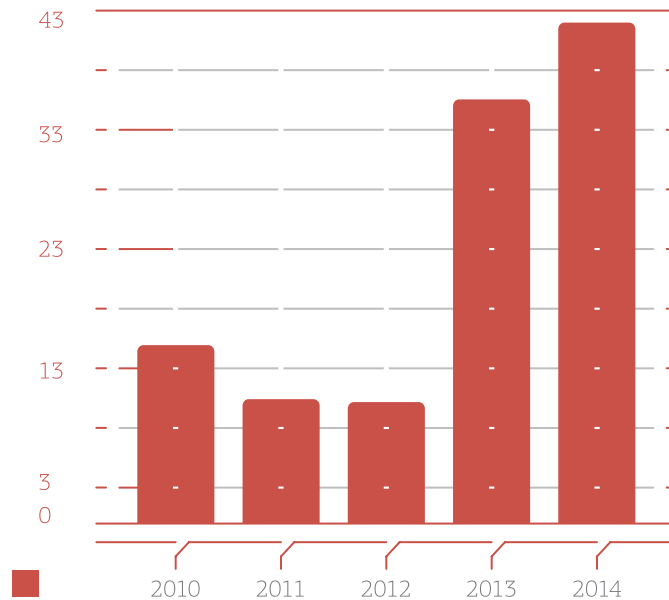


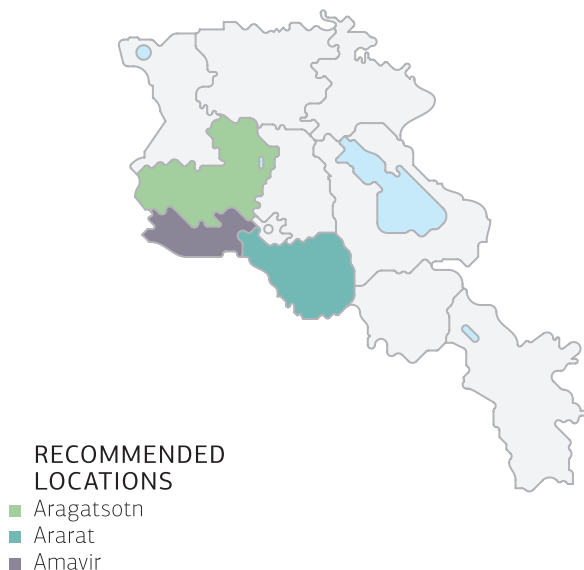
FIGURE 10:
Export of Berries;
2010-2014 (tonnes)

S T R A W B E R R Y



MARZ	AREA (HECTARES)	YIELD (TONNES)
ARAGATSOTN	1,026	123,120
ARARAT	15	1,800
ARMAVIR	140	16,800
TOTAL	1,181	141,720

Available strawberry area in Armenia in 2014



GENERAL OVERVIEW

Among berries produced in Armenia, the highest share in exports belongs to strawberry. In 2014, the net weight of strawberry export was 42 tonnes. Aragatsotn, Ararat, and Armavir marzes have the climate and soil type that are best suitable for strawberry production. The total area under berry cultivation in these marzes is 1,635 ha, out of which strawberry accounts for 1,181 ha. This includes both greenhouse and open field areas.

EXPORT

The export of strawberries from Armenia has a short history. The main counties of export are the United Arab Emirates and the Russian Federation.

CONSUMPTION/ PROCESSING

Local processors use the strawberry for compotes, juices and traditional sweet preserves. Deep freezing technologies are also used to preserve taste and the appetizing look of berries for deep freeze export.



FINANCIAL INFORMATION

INPUTS

ANNUAL YIELD PER HECTARE, TONNES	350
PLANTS PER HECTARE	50,000
INVESTMENT PER HECTARE (CAPEX), USD	400,000
IMPLEMENTATION PERIOD (TIME TO ESTABLISH THE FACILITIES), MONTHS	12-18
FIRST HARVEST TIME	2 MONTHS
RECOMMENDED SCALE, (IN HECTARES)	5
PLANT LIFE CYCLE, MONTHS	12
TECHNOLOGY APPLICABLE	HYDROPONIC FARM

SUCCESS STORY

BIGA

“Biga” Armenian-Dutch joint company was founded in 2008. Today BIGA is one of the leading agricultural fresh produce companies in Armenia. BIGA grows fresh strawberries (about 1000 tonnes per season), fresh cherry tomatoes and fresh white button Dutch mushrooms (about two tonnes per day).

The main export markets are UAE and Russia, with some deliveries to Kuwait and Far East. The produce of Biga is displayed in Carrefour and Spinney's in UAE, as well as in leading supermarkets in Russia.

POPULAR VARIETIES

The most common strawberry varieties are Albion, Portola and Monterey. They have sweet flavored, red throughout, and evenly shaped berries with a high percentage of top quality fruit. These varieties have high resistance to disease and are day neutral plants; which means that they flower throughout the year no matter the length of the day.

All these varieties guarantee extended shelf life, which makes the production more competitive in terms of exportation and marketing.

OUTPUTS/ RATIOS

NPV, USD	104,548
IRR, %	28.85%
PAYBACK PERIOD, YEARS	3.19

NOTES:

1. Plants are mainly imported from EU (Netherlands) and USA.
2. Open air strawberry growing farm is considered in the calculations.
3. Discount Rate - 20%.



VEGETABLES

GENERAL OVERVIEW

Vegetable growing is among the priority subsectors of Armenian agriculture and has a history and traditions of thousands of years. Armenia has a large diversity of flavorful and healthy vegetable varieties due to its favorable geographic location and limited use of fertilizers and pesticides.

The main types of vegetables are: tomato, cucumber, cabbage, onion, eggplant, radish, carrot, garlic, and others. Traditional types are very well complemented with non-traditional vegetables, such as brussels sprouts, chinese cabbage, lettuce, broccoli, and kohlrabi.

EXPORT

The main countries of export are the Russian Federation, the United Arab Emirates, Kuwait, Georgia, Hungary, and Iraq.

CONSUMPTION/ PROCESSING

Vegetable processing is a well-developed industry in Armenia. Availability of high quality domestic vegetables allows Armenia to be profitable in the production of canned food, tomato paste, and vegetable marinades.



FIGURE 11:
Gross Harvest of Vegetables;
2010-2014 (thousand tonnes)

T O M A T O

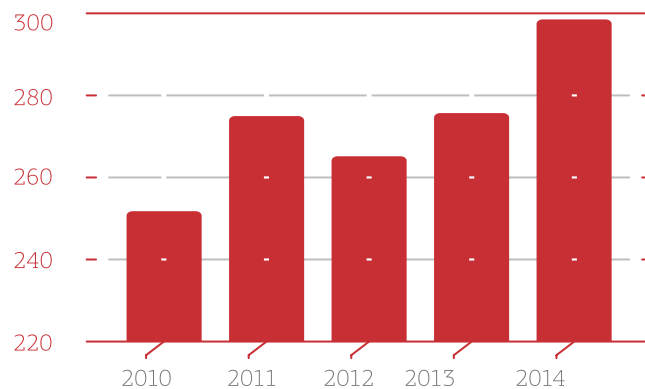


FIGURE 12:
Gross Harvest of Tomato; 2010-2014 (thousand tonnes)

GENERAL OVERVIEW

Tomato has the highest volume of production and consumption among the vegetables in Armenia. Tomatoes are rich in nutrients and are important for a well-balanced diet. Tomatoes came to the Armenian Highlands from Italy and North Africa about 150 years ago, and have been very popular ever since.

EXPORT

The main countries for export are Russia and the United Arab Emirates.

CONSUMPTION/ PROCESSING

Most of the local companies process the tomato into tomato paste. Tomato juice and canned vegetables are also very popular in the local market.



FINANCIAL INFORMATION

INPUTS

CROP TYPE	CHERRY TOMATO
ANNUAL YIELD PER HECTARE, TONNES	200
PLANTS PER HECTARE	24,000
INVESTMENT PER HECTARE (CAPEX), USD	2,760,000
IMPLEMENTATION PERIOD (TIME TO ESTABLISH THE FACILITIES), MONTHS	12-18
FIRST HARVEST TIME	3 MONTHS AFTER SEEDING
RECOMMENDED SCALE, HECTARES	1
RECOMMENDED VARIETIES	CHERRY,BEEFSTEAK
PLANT LIFE CYCLE, IN MONTHS	12
TECHNOLOGY APPLICABLE	HYDROPONIC GREENHOUSE

POPULAR VARIETIES

The popular varieties are Cherry, Beefsteak, and Standard juicy tomato varieties. Cherry tomatoes are slightly smaller and sweeter than conventional tomatoes. Juicy tomatoes are perfect for eating fresh or using for canning and preserving. The endemic variety for Armenia is Anahit – a well recognized variety with a sweet flavor and rich aroma.

OUTPUTS/ RATIOS

NPV, USD	885,860
IRR, %	30.78%
PAYBACK PERIOD, YEARS	3.03

NOTES:

1. Productivity of Cherry type is lower than that of Beefsteak type but prices are higher,
2. The productivity could be increased up to 30% by installing special lighting system,
3. The calculations are made for Cherry type tomato.
4. Discount Rate - 20%.





ANIMAL HUSBANDRY AND FISHERY

GENERAL OVERVIEW

Livestock breeding is one of the leading branches of the agricultural sector in Armenia. Mild climate and the massive area of alpine pastures characterize the meat and dairy sectors. Animal husbandry in Armenia goes back to the Paleolithic period when primary forms of agricultural activities appeared in the Armenian Highlands.

Today nearly 40% of the gross agricultural output in Armenia is received from animal husbandry. Over 90% of the animal output is generated by households, while nearly 10% (mainly poultry) is produced by commercial farms.

Although the Armenian market has a shortage for some types of meats, on the other hand there are great opportunities for the export of meats and processed products to the state members of the Eurasian Economic Union. The Government is supporting this sector with ongoing improvement of legislation, the upgrade of laboratories and the construction of appropriate infrastructure to ensure traceability and facilitate the export of fresh and processed meat. Therefore, one can capitalize on these opportunities and invest in sheep, cattle, fish farming, as well as the poultry industry. There are also opportunities for feed crop production, since a high share of feed (especially fish and poultry feed) is imported.

Livestock numbers in
Armenia (thousand heads), 2010–2015

NUMBER OF ANIMALS	2010	2011	2012	2013	2014	2015
CATTLE (TOTAL)	570.6	571.4	599.2	661	677.5	688.6
OF WHICH COWS	273.9	272.6	283.3	303.3	309.6	313.9
PIGS (TOTAL)	112.6	114.8	108.1	145	139.8	142.4
SHEEP	511	532.5	590.2	674.7	687.1	713.9

S H E E P B R E E D I N G

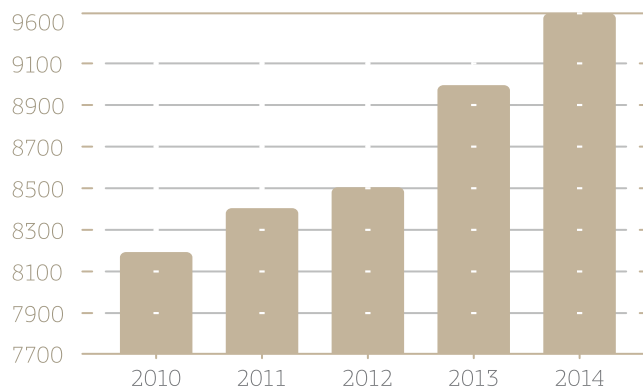
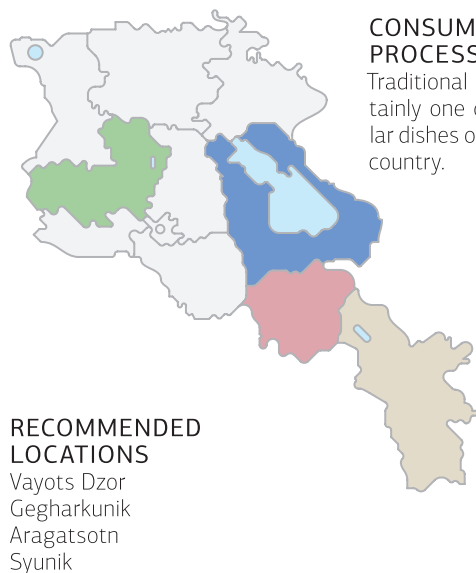


FIGURE 13:
Mutton production; 2010-2014 (tonnes)



CONSUMPTION/ PROCESSING

Traditional khashlama is certainly one of the most popular dishes of fresh lamb in the country.

GENERAL OVERVIEW

Sheep breeding is one of the traditional animal husbandry branches in Armenia. Sheep breeding is better developed in the mountain and sub-mountain regions of the country because of large grassland availability. There are more than 1 million hectares of mountainous and pre-mountainous pastures, which is particularly favorable for mutton production. It is well known, that the quality of pasture bred sheep meat is particularly high, and this explains why the demand for Armenian sheep has been continuously growing.

LOCATION

Vayots Dzor, Gegharkunik and Aragatsotn marzes are particularly favorable for sheep production. In particular, it is recommended to breed Balbas sheep breed in Vayots Dzor, Gegharkunik and Aragatsotn marzes and MazeKh and Balbas in Syunik marz.



POPULAR VARIETIES

For centuries, due to efficient selection works, several endemic breeds of sheep, such as MazeKh, BozakKh, Gharabaghtsi, and Balbas that are exceptionally adapted to the local climatic conditions are successfully bred in Armenia. On top of that, Armenian stock-breeders raised a new medium-wool bred sheep. This new breed has white semi-harsh wool which is an excellent raw material for carpet manufacturing. Recently some new sheep breeds were imported to the country; pelt wool, fertile romanov and fat-tailed sheep of Edilbay are successfully adapted to the local climatic conditions.

FINANCIAL INFORMATION

INPUTS

INVESTMENT PER HECTARE (CAPEX), USD	230,000 -250,000
RECOMMENDED QUANTITY OF SHEEP	1,500
RECOMMENDED SPECIES	ROMANOV BREED
LOCAL SPECIES	MAZEKH, BOZAKH, BALBAS
ANNUAL AVERAGE ANIMAL YIELD	1.1-1.5
TECHNOLOGY	6 MONTHS OPEN AREA AND 4 MONTHS SHELTER BREEDING

OUTPUTS/ RATIOS

NPV, USD	21,076
IRR, %	21.92%
PAYBACK PERIOD, YEARS	4.30

NOTES:

1. Discount Rate - 20%.

EXPORT

Main countries of export are: Iran, Georgia, Qatar, Kuwait, and Lebanon. During the recent years only live sheep was being exported to Iran, since the halal certification was required for slaughtering. Two halal slaughterhouses were recently established by the Iranian border, which opens up opportunities for exporting not only live sheep, but also prepackaged meat.

S W I N E B R E E D I N G

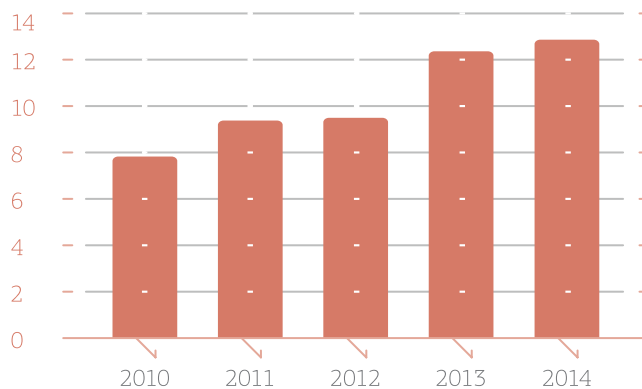
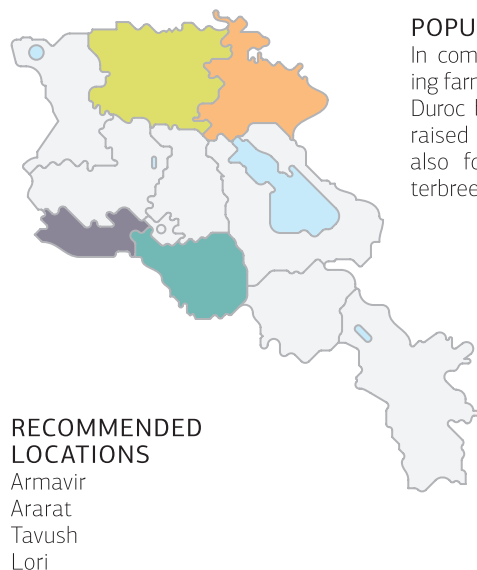


FIGURE 14:
Pork production; 2010-2014 (thousand tonnes)



POPULAR VARIETIES

In commercial pig breeding farms Landras, Petren, Duroc breeds are mostly raised which are used also for commercial interbreeding.

GENERAL OVERVIEW

Swine breeding is one of the major branches of animal husbandry in Armenia and is more developed in Armavir and Ararat marzes with the biggest concentration of pig heads. In the northern part of the country, in Tavush and Lori marzes free stall mountain and forest housing system is used. Thanks to the efforts of the scientists, local Armenian pork type breed was developed which is mainly raised in residential backyards.

EXPORT/ CONSUMPTION

The export of the swine in 2013 was only 0.4 thousand tonnes. The low level of export is conditioned on low self-sufficiency of pork production (46.3% in 2013).

Pork consumption is not very stable throughout the year, it is moderate in the beginning of the year and is mainly consumed by the HoReCa sector. Pork consumption declines in spring, but increases during summer (pork barbeque is the main course during picnics and holidays). The volumes of pork consumed decline in fall, but then pick up during Christmas and New Year holiday season.



FINANCIAL INFORMATION



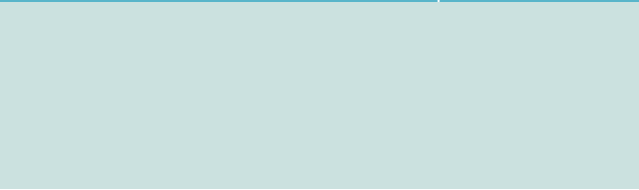
INPUTS

VARIETIES	LANDRAS
INVESTMENT TOTAL, USD	2,500,000-3,000,000
RECOMMENDED NUMBER OF SOWS	300-400



OUTPUTS/ RATIOS

NPV, USD	498,317
IRR, %	24.12%
PAYBACK PERIOD, YEARS	4.32



NOTES:
1. Landras, Yorkshire, and Dyurok varieties are recommended for breeding.
2. Discount Rate - 20%.



CATTLE BREEDING

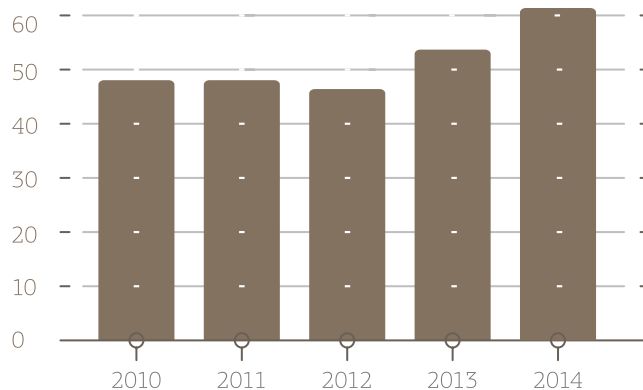


FIGURE 15:
Cattle production; 2010-2014 (thousand tonnes)



POPULAR VARIETIES
93 % of the cattle raised in Armenia is milk and beef category Brown Caucasian. Holstein, Brown Swiss, Simmental, and Black species are also bred in Armenia.

GENERAL OVERVIEW

Cattle breeding is the leading branch of animal husbandry in Armenia. 95 % of milk and almost 55 % of meat in Armenia is produced due to cattle breeding. About 170 commercial farms are engaged in cattle breeding. In low-lying regions of the country the cattle is mostly housed in the stalls all year round while in mountain and submountain regions free stall housing system is commonly used. The pedigree and yielding characteristics of the breeds raised in Armenia has been developed for years by using Brown Swiss. At present cattle breeding sector shows growing tendency for investments and application of modern technologies that is mostly displayed in Syunik marz. For development of animal husbandry in Armenia, the RA Government approved "Animal Husbandry" project in the frame of which 2000 heads of Holstein, Brown Swiss, Simmental pedigree heifers were imported and provided to 60 business entities. Annually 1500 heads of high value calves are produced a part of which is used for reproduction of herds and the rest is sold in the country to other cattle breeding farms.

CONSUMPTION

The consumption volumes of beef are not stable across the year—people consume relatively large volumes of beef in the beginning of the year until mid-spring. Then beef consumption declines and stays low throughout the late spring and summer, because of the availability of vegetables and due to the increase in the seasonal pork consumption. In autumn beef consumption increases again, reaching its peak in December.



FINANCIAL INFORMATION

INPUTS

VARIETIES	BROWN CAUCASIAN
BREEDING PERIOD, MONTHS	3
INVESTMENT TOTAL, USD	500,000
RECOMMENDED SCALE (HEADS OF BULLS)	100
BULL WEIGHT FOR PURCHASE, KG	180
BULL WEIGHT FOR SALE, KG	230

OUTPUTS/ RATIOS

NPV, USD	312,020
IRR, %	37.72%
PAYBACK PERIOD, YEARS	2.70

NOTES:

1. Discount Rate - 20%.
2. New slaughterhouses are operating in Lori, Vayots Dzor, Aragatsotn and Kotayk Marzes.

P O U L T R Y

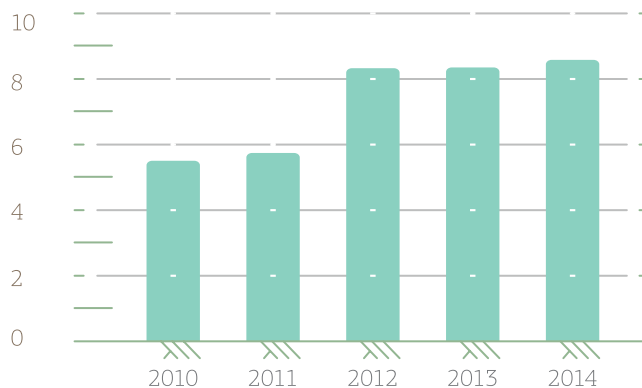
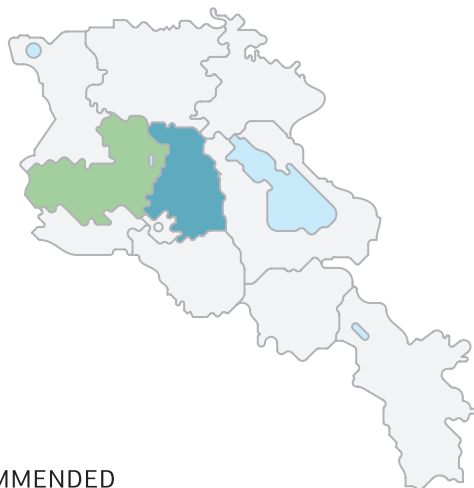


FIGURE 16:
Poultry production; 2010-2014 (thousand tonnes)



RECOMMENDED LOCATIONS

- Aragatsotn
- Kotayk

GENERAL OVERVIEW

Poultry breeding is one of the most automated branches of animal husbandry in Armenia with application of modern technologies. It is characterized by large volumes of eggs and poultry produced by commercial farms. At present there are more than 10 medium-size and large poultry enterprises in the country producing eggs and poultry meat. Although some village eggs can be found in the market, however eggs are mainly produced by poultry factories.

EXPORT/ CONSUMPTION

The export of the poultry in 2013 was only 0.2 thous.tonnes. This number is explained by the fact that Armenia is a net importer of poultry (80% of poultry consumed in 2013 was imported). Production of local poultry has increased by 45% from 2011 to 2012. This is explained by the fact that Armenian consumers have a strong preference towards the locally produced poultry.



FINANCIAL INFORMATION

INPUTS		OUTPUTS/ RATIOS	
VARIETIES	BROILER	NPV, USD	1,230,147
BREEDING PERIOD, MONTHS	1-1.5	IRR, %	27.69%
INVESTMENT TOTAL, USD	3,500,000-4,500,000	PAYBACK PERIOD, YEARS	4.13
RECOMMENDED SCALE (CHICKEN)	400,000		

POPULAR VARIETIES

Due to selection works carried out by the Armenian scholars, the Yerevan breed of hens was developed with its black and white types. This breed is well adapted to the local climatic conditions and is mostly raised in residential backyards.

NOTES:

- 1. Broiler variety is recommended for breeding.
- 2. The chicken consumption volumes are growing slightly.
- 3. The risk of different diseases is comparatively low in Armenia.
- 4. Discount Rate - 20%.

F I S H

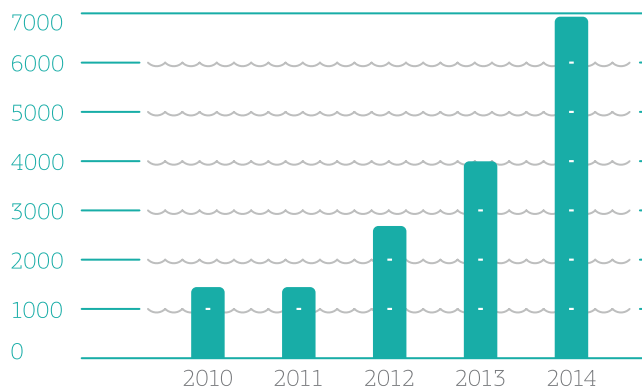
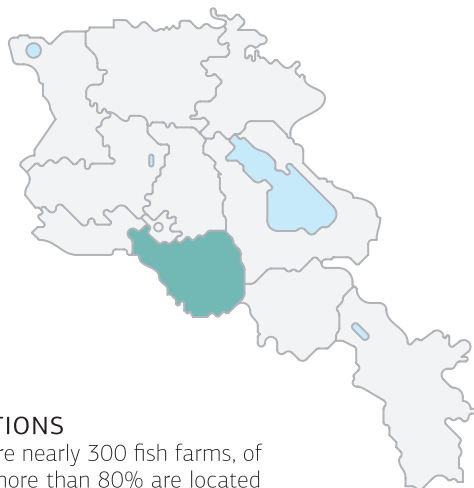


FIGURE 17:
Fish export; 2010-2014 (tonnes)



LOCATIONS

- There are nearly 300 fish farms, of which more than 80% are located in the Ararat Valley, but the climatic conditions in other marzes are suitable for fish production as well.

GENERAL OVERVIEW

During the last decade Armenian fish production flourished and the number of profitable fish farms operating in the region increased dramatically. Fish exports from Armenia soared from about 320 thousand USD in 2004 to nearly 17 million USD in 2013 (a 50 fold increase). Fish production has been recognized as one of the most promising industries in the country. For increased productivity, bigger and more efficient fisheries started introducing semi-closed cycle of water management in the fisheries.

EXPORT

The main countries of export are Belgium, France, Russia, Ukraine and Georgia.

POPULAR VARIETIES

Most popular varieties are trout and sturgeon. Crayfish breeding volumes are very high as well.

**NOTES:**

1. Recirculated Aquaculture System (RAS) decreases the water losses and significantly increases the efficiency of the production processes.
2. RAS also allows (I) to regulate and control internal environment, suitable for cultivated species; (II) to decrease the risk of fish diseases appearance, the pathogens of which can be brought from the environment; (III) to lower an ecological load on external ecosystems; (IV) to place this system in any district irrespective of a source of water supply or a climatic zone.
3. Underground "artesian" water natural temperature is about 18 degrees Celsius, which is ideal for fish breeding and does not require additional heating.
4. The calculations are made for Sturgeon (50%) and Trout (50%) respectively.

FINANCIAL INFORMATION**INPUTS**

PRODUCTIVITY PER YEAR, TONNES	200-250
INVESTMENT TOTAL (CAPEX), USD	1,800,000-2,000,000
WATER DEMAND FOR 1 KG FISH, LITERS	200-300
THE DENSITY OF FISH FOR COMMODITY BREEDING, KG/M ³	70-120
VARIETIES CONSIDERED IN CALCULATIONS	STURGEON, TROUT

OUTPUTS/ RATIOS

NPV, USD	207,496
IRR, %	23.81%
PAYBACK PERIOD, YEARS	3.70

NOTES:

1. Discount Rate - 20%.



PROSPECTIVE SPHERES

GENERAL OVERVIEW

Today, several different commodities can be considered prospective or having high production and export growth potential. These commodities can contribute to high value added production, such as those used in the production of beverages and organic produce. Prospective sub-sectors can be different varieties of berries, fruits or nuts, that have high demand on the local market and abroad. This list can include agricultural processing as well- production of dried fruit, cheeses, wine and brandy.

High growth perspective have spheres contributing to development of agriculture, such as agro-logistics (consolidation, packing, sorting and exporting of agricultural production).



CHEESE

Milk production in Armenia has increased about 17% during the last three years. Milk is processed into yogurt, cheese, sour cream, butter and cottage cheese. Armenia's geographical peculiarities Alpine meadows, different altitudes and large areas available for pastures, are uniquely suitable for cheese making. There are opportunities for tapping into niche markets for cheese since consumers increasingly demand non-traditional varieties of cheese such as Roquefort, Swiss cheese, Gouda, Mozzarella and Suliguni. Low costs of production and newest technologies imported from EU countries, as well as year-round production of

fresh natural and ecological milk allow producing high quality cheese at competitive prices.



RASPBERRY

Raspberry production is considered one of the most promising industries in Armenia. This berry is very popular not only in the country, but also abroad. It is a great source of vitamin C and manganese needed for the human body. Most of the quantities produced in the country are collected by juice and preserve processing companies. During recent years organic raspberry production has been introduced. Organic preserves are well demanded in US, Europe and Middle East. In Armenia and Russia raspberry jams and preserves have always been a necessary attribute of the morning tea, especially during winter months.



BLUEBERRY

It has been recognized that blueberry has the highest level of antioxidant among all fruits and vegetables. It is rich in vitamins and positively affects digestion and cardio-vascular systems, as well as improves the vision and slows down aging process. Due to all these health benefits, blueberry consumption worldwide increases by 6-8 % every year. Cultivation of blueberries can be carried out in soil mixture with special ingredients. Even if planted in small areas, blueberries will provide 7-10 times more income than traditional crops, such as potato. Due to the firm surface blueberries can be relatively easy to transport. These berries can be consumed fresh, can be frozen or dried.



NUTS

Armenia has favorable conditions for growing nuts, particularly hazelnut, almond, and walnut. The most popular is walnut. The average consumption of nuts in Armenia is 1.61 kg per capita (2011).

Armenia is a net importer of nuts (the import value of nuts in 2014 was 1,108,439 USD), which implies that there is a high demand to fill right here in Armenia. The EEU membership of Armenia provides an opportunity for nut producers to tap into the Russian market (which currently imports over 300 mln USD worth nuts).

Walnut trees like mild climate and soil that is wet but well drained. In Armenia the most desirable geographical conditions for growing nuts are in the Tavush, Lori, Kotayq, Ararat, Vayots Dzor, and Syuniq marzes.



SUCCESS STORY

GARDENIA LEBNIZ FARMS

Lebanese company Gardenia Lebniz Farms is establishing pecan orchards in the Kotayk province of Armenia to grow four varieties of the nuts. This project is a new vision and a unique agricultural project in the region of Eurasia. In 2015 Gardenia Lebniz Farms LLC purchased 100 hectares of uncultivated land in Yeghvard. As a first step, nut orchards have been established; the company planted 5000 trees on 22 hectares of land. The next step of the project will include increasing the plantation of pecan trees up to 30,000 on 100 hectares of land. The production capacity of these trees will reach 2000 tonnes by 2020, 3000 tonnes by 2025, and 5000 tonnes when the trees reach their full production capacity. Besides creating the agricultural value, this project will also attract tourists and local visitors after building a mini-mall, American and Lebanese restaurants, and St. Charbel's chapel.

Jamil Abdeim,
Company Representative in Armenia:



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