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GEORGIA HAZELNUTS ASSESSMENT

FINAL

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ABSTRACT

USAID/EPI brought a consultant who is a hazelnut marketing expert to Georgia on a two-week visit. The consultant's deliverables were to observe and analyze which if any improvements needed to be made to the hazelnut value chain. In order to market hazelnuts to the most profitable markets, and in order to ensure that hazelnuts are of the best quality that they can be, this Georgian hazelnut assessment was conducted.

Currently, in Georgia, most hazelnut production takes place in small farms and gathering conditions in two major regions of the country: east and west. The hazelnut key value chain players were met with and discussions were held. Harvested hazelnuts are handled by collectors who speculate on the market and deliver product to packers. Packers select product for two distinctive channels: inshell and shelled hazelnuts and do some further processing, including roasting, blanching, slicing, dicing and paste production. The value chain was investigated and improvements to the hazelnut value chain in Georgia were recommended.

CONTENTS

I. EXECUTIVE SUMMARY

Georgia is a traditional production region for hazelnuts. Currently, most production is in small farms and gathering conditions in two major regions of the country: east and west. Harvested hazelnuts are handled by collectors who speculate on the market and deliver product to packers. Packers select product for two distinctive channels: inshell and shelled hazelnuts and do some further processing, including roasting, blanching, slicing, dicing and paste production. Although most Georgian hazelnuts could be considered organic, there is no certification of organic production in the country. Georgian production is either shipped to neighboring Turkey which is the dominant world producer of hazelnuts, or to European customers. Georgian production lacks some of the processing quality and packing that is required for direct sales to confectionery and food industries. So, intermediate customers or ~~-p~~artners" fulfill an important function of getting product to delivery condition, i.e. cleaning, grading and packaging.

Description and Structure of Markets

The world trade of hazelnuts centers on a very few large trading companies who have long-established relationships with confectionery companies who use a majority of hazelnut production. For example, there are 10 more traders in Hamburg and Rotterdam, and they all have offices in the same neighborhoods near the port. These companies are in very tight formation with buyers and have decades of business on the books. The new companies that are listed are on the fringes and are currently already sourcing from secondary sources or are looking to fill requirements for new customers. The new import companies have direct linkages with the end users, have technical service capabilities and are in a position to develop new markets for hazelnuts. Where they lack in huge volumes, they make up in willingness to work with new suppliers and provide assistance and support. This will be a recommended channel for Georgian hazelnuts.

Georgian Production Capacity

Georgia is currently a small player in the global hazelnut industry. Being attached to Turkey, the main player, Georgia fills supply needs in this country and has direct field grade and raw material and semifinished product shipments to main European markets. In addition, the production is stable and limited to small farming activities, in which packers are supplied by farmers through a middleman and direct sales to packers. This situation is seriously limiting the development of new production. Georgia has substantial amounts of land available for hazelnut production and some of this is in areas where discontinued tea production as occurred. Other acres are in the East and in new and nontraditional hazelnut production areas. The small producer, handler and packer arrangements does not seem to stimulate new plantings and business because the middle men are regulating supply to keep pricing up to the packer. Packers are struggling to get supply. The supply pull will not begin until packers start to source directly from producers. They will initially compete for producers, and provide incentives like higher prices and some serviced and technical support. In time relationships will develop and packers will build bases of production which will grow as the market grows.

Identification of Policy and Regulatory Conditions to Improve Sector

The hazelnut sector is a priority agricultural commodity in Georgia and has received a substantial amount of attention from the central government. It is also a priority item for

assistance from donor nations, and assistance programs. From a policy standpoint, the formation of a ~~"m~~marketing order" type of program, which would allow development activities and controls, which could benefit the entire sector. Modeled after the Oregon Hazelnut Committee in the USA, the program could address four different areas:

1. Quality. A law would be established to define quality standards for Georgian hazelnuts. This would include size, color, and other criteria that are important to the buyers. In short, anyone would be able to grow hazelnuts in Georgia, but only those which meet the mandated quality criteria could be marketed and exported. The law would define an inspection mechanism at the packer level, as well as fines and consequences for violating this aspect of the marketing order.
2. Research. The law would allow for identification and funding of research to serve the needs of the Georgian hazelnut industry. This would include research and development of new plant stocks, new products and processes and economic research.
3. Promotion. The law would allow funding of market development and promotions in the domestic and world markets, including market research, exhibitions, advertising and trade missions.
4. Control. A board would have powerful marketing functions to create order in the marketplace. This includes setting marketable supply, reserve pools, tools for limiting product on the market, such as green drops (payment for destruction of the product on the tree) and other mechanics.

The marketing order would be funded by an assessment per metric ton, on product received by packers. The assessment would be passed along to the end user, and in the case of Georgia, there is adequate room for price increases. In the USA, assessments for commodity boards range from one cent per lb for honey to around $12 per ton for blueberries. Most products, such as almonds and walnuts, are assessed at around $24-36 per ton. This would cover operating expenses of a board office and a collection mechanism. A board would be formed which would represent the geographic profile of the industry and would be selected in an election by industry stakeholders. Typically, this would be the growers, but could also be the packer who in turn represents a producer base.

Constraints:

Some of the main hazelnut industry problems are listed below:

Infrastructure – due to the current approach of collecting and sourcing hazelnuts through collectors, there is no long-term, direct relationship between farmers and processors as there is a middleman collector in between. Thus, there is no way to directly incentivize farmers to make changes in production practices or quality.

Product and Market Selection – the in-shell market is a lucrative business that requires far less packer input than the shelled market. Additionally, the packer is selling 100% of the product and not worrying about hazelnut shell disposal. For the inshell market, the nuts must be large, round, clean and with no blemishes and there is a small window of sales opportunity primarily based on the Christmas market in Europe. The shelled market, size of the nut meet kernel is the primary concern, but there are no real market standards used in Georgia. Appropriate packing in cardboard boxes with plastic liners not only keeps the product cleaner and looks more professional, but also allows for cases to be loaded on a pallet with 1/3 more hazelnuts per container, lowering freight rates on a per unit basis.

Certification and Standards – currently buyers and sellers informally agree on the standards of traded hazelnuts. The adoption of USDA hazelnut standards, which is the basic world standard, will allow buyers, sellers and intermediate traders to speak the same language in terms of product quality, as well as setting and avoiding disputes.

Business Management – The Georgian hazelnut industry needs a quality improvement guide and framework. A good model is the Dried Fruit and Treenuts Association (DFA) from the USA, which was established in the US over 100 years ago. There should also be an improvement in record-keeping, traceability, inspection and implementation of standards.

Linkages and Partnerships – The global treenut business is a tight-knit group of packers, handlers, importers and end-users. There needs to be a significant amount of linking Georgian companies with real, substantial customers in markets that will not interfere with their current business relationships. There should be some image development for Georgian companies and develop a packer list of Georgian hazelnut processors. Some simple technical assistance on plant improvement will enable them to help in image improvement.

Conclusions and Recommendations

Recommendations have been made in individual sections. But, overall it is recommended overall that to help Georgian producers enter the 20th century with key trade contacts in regions of the world. These new buyers will help move hazelnuts to new markets in significant volumes and will work with Georgian suppliers on ascension to real world standards and specifications.

- Georgian packers must seek direct business relationships with dedicated grower base in order to influence production improvement and extension activities that will encourage more production of marketable types of hazelnuts.
- Georgian packers must diversify their customer base and work with more than single customer ~~-p~~artners" who can provide guidance and product improvement in the marketplace.
- Georgia can begin gaining a presence in the treenut world, and seek out new customers in alternative areas of the world such as Canada, Southeast Asia, Central and South America, and other areas – where they can market more hazelnuts and not disturb the important status quo in western Europe.

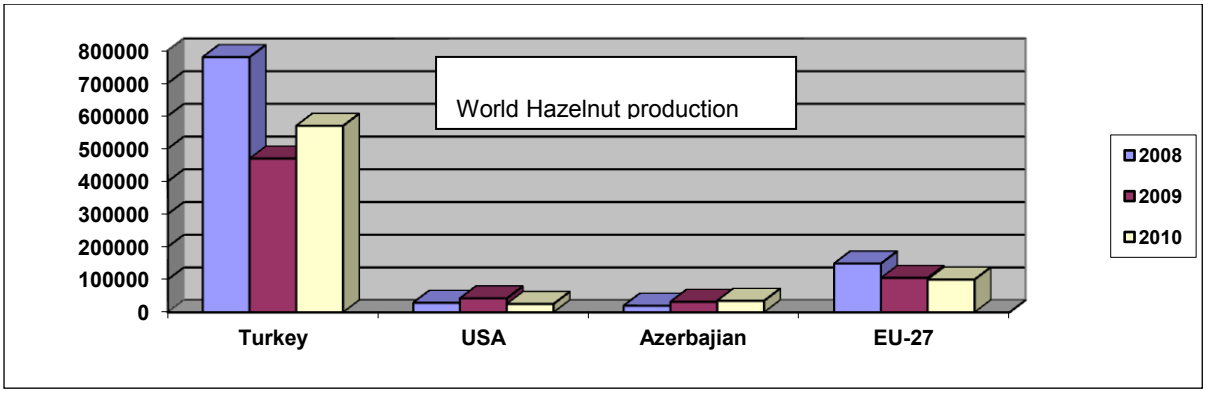
A. FINDINGS & RECOMMENDATIONS

B. ADDITIONAL INFORMATION

A. FINDINGS & RECOMMENDATIONS

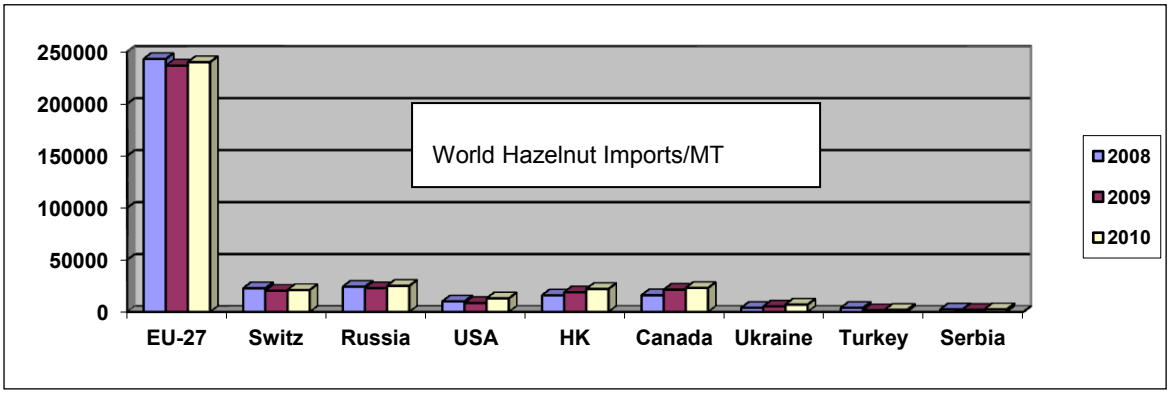
MARKET ACCESS

Georgia is a small player in the world hazelnut production with less than 2% of total production. Turkey and the Black Sea regions next door are the major producers of hazelnuts, producing more than 570,000 metric tons and 80% of the total world supply. Hazelnuts are produced in two distinctive regions of Georgia, the East and West. The west appears to be the more traditional area for production and an extension of the Turkish Black Sea hazelnut belt.



PARTNERS

At face value, the industry is doing just fine. Each of the 15 processors, which were visited, initially says they are ~~"d~~doing good business, with a partner in Western Europe." At second swipe, it was learned these partners are actually solo customers who come into the market once a year to buy their requirements. They purchase the product ~~"a~~as is" and dictate prices. These ~~"p~~artners" are extremely important, as some may actually be investors. However, at the same time, they have kept the packers in suspended animation. They need to do little to improve product to world standards, and all recognize that they are receiving purchase prices well below the world trading ceiling for hazelnuts. On second and third meeting, packers would disclose their need for diversified market. They are concerned that they not rock the boat with their current customer. But, they also show a high degree of interest to initiate new market initiatives.



MARKETING

None of the packers has many of the fundamentals for sales in the ~~-~~real" marketplace. It is extremely difficult to discuss product offerings of individual packers, who have very vague terminologies, no standardized specifications or marketing information. They have the calibration and sizing down pat, but besides this, they have ambiguous descriptors of further processed products, unclear terminologies.

Activity:

- INC Meeting. Georgian delegation attends the International Nut Congress (INC) in 2012. This will be a ~~-~~coming out party" for the group and attendees will see the real world of buyers and sellers, and will also make key contacts with new customers and channel partners.

PRODUCT AND SERVICE ENHANCEMENT

PRODUCT DEVELOPMENT AND OFFERINGS

Typically, nut producers experience company expansion from inshell producers, to shellers, to specified items and specialty products. In Georgia, this is a mixed bag of product offerings based of course on the demands of their European customer, which is always almost a primary nut product. They are struggling with new product items that they know are traded on the world market, especially in the confectionery area. This includes simple product adaptations such as sizing and shape selection to categories that require extensive capital expenditures such as roasting, blanching, slicing, dicing and production of paste. It is recommended that most of these producers concentrate on their mainstay product, the natural whole hazelnut and work on getting their production and processing optimized, before they start new lines.

The current European customers are sourcing the bargain nuts from Georgia because of deficiencies in the process that is not up to European or American nut processing standards — which customers want to see. It is important to ask what would the buyer from Nestle think if he was in this plant? The reality is that most Georgian processors will ship raw

materials in jute bags, and they are reprocessed in Europe to meet end user specs. Most probably, many companies are moving into the value-added products area based on instinct and have no market demand at the end of the investment. It was clear that several companies with large unused roasters and other owners spoke with stars in their eyes about the need top of the line laser sorters, blanchers and paste operations.

SERVICE ENHANCEMENT

The Georgian producers have been buffered from the real world of marketing and new market activity. For the most part, they are terrified about the prospect of dealing with new customers in strange lands. They are lacking some very basic fundamentals that are necessary for going from total stranger to customer. Unfortunately, many are looking to the Internet and sales portals as the answer, which is indeed an extremely dangerous proposition. Even describing very basic fundamentals of sales prospecting takes a long time. This included:

- Prequalification of companies – what to look for as a danger signal of a waste of time. Product description methods using digital photos, measurement and terminologies.
- Sampling to legitimate companies and how to ship, and keep cost down and gain commitment from potential customers with partial payment.
- Test samples (dispute prevention).
- Simple laboratory analysis. Just a few basic analysis are required.
- Pricing.
- Export packing.
- Money collection. Many companies are ready to ship without payment just because the customer is from a developed country.

Activities:

- Marketing plan. Development of a comprehensive industry marketing plan to document situation, competitive analysis, market situations, constraints/opportunities, strategies, tactics and evaluation methods for new market activity.
- Individual consultations. One-on-one meetings and consultations as well as follow-up on sales and marketing issues will be provided. This will help guide Georgian producers on sales prospecting, market development and transaction fundamentals.

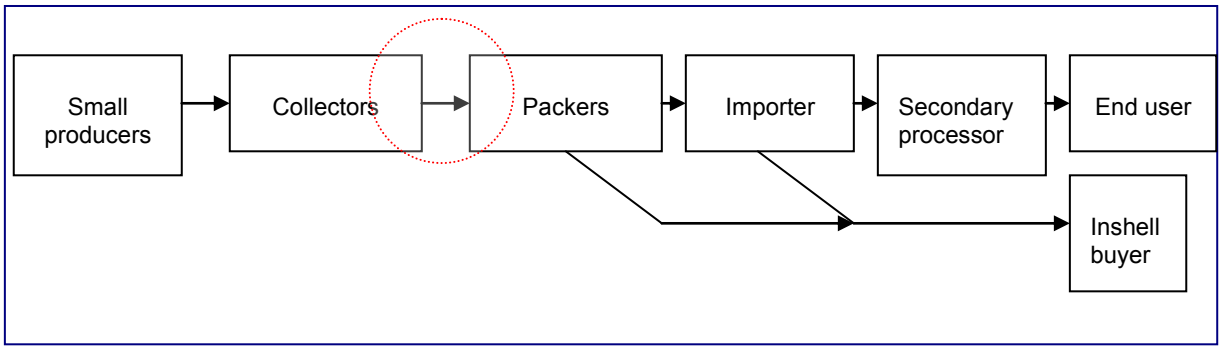
INFRASTRUCTURE IMPROVEMENT

The Georgian hazelnut industry is structured differently from other treenut industries – and some of the differences are responsible for typecasting as a raw material supplier rather than an ingredient supplier to the food industry.

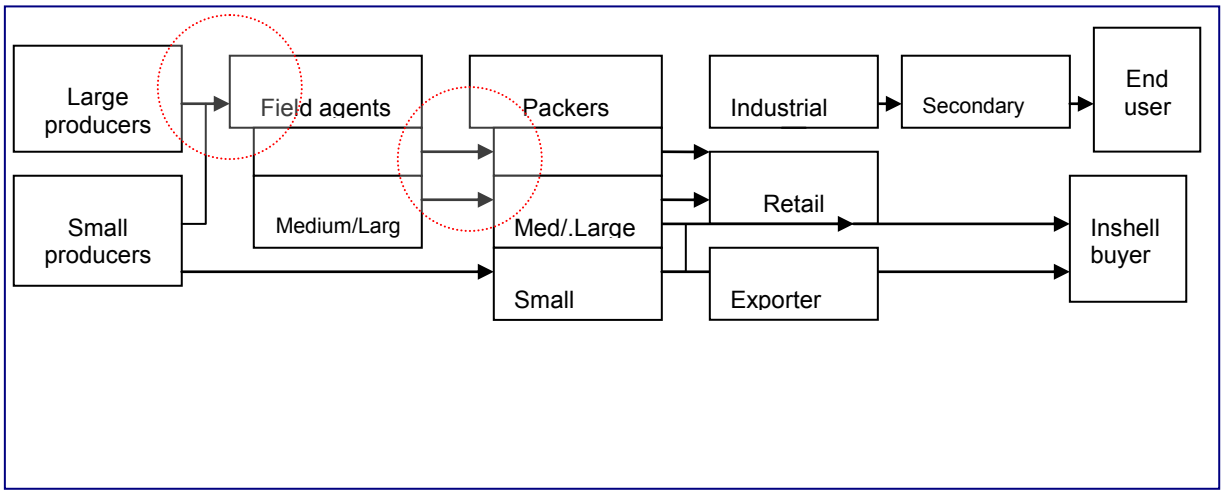
STRUCTURE

The Following two charts show the differences between Georgia and Oregon in the USA.

Georgia:



Oregon/USA (Exhibit X)



PRODUCTION TO PACKER COMPONENTS

- **Production**: Georgia is a country of thousands of small producers scattered around the two main growing regions. Growers produce the nuts in small plots or on their own lands and knock the trees to produce field-grade hazelnuts. The hazelnuts are air dried on the ground down to a point of equilibrium where there will be no mold or spoilage. Note: this gives the producers in the eastern regions an advantage in that due to their dry climate, this gives them the opportunity to sell directly and quickly with less or no additional dehydration.
- **Field Transportation**. There is very little organization among producers, and all are freelancers. Producers place field grade hazelnuts into used plastic mesh bags and transport to local towns or cities where they deliver bags of nuts to collectors. Typically, transportation is done in the back of small trucks and cars and the average delivery is six bags of 50 lbs.
- **Collectors.** Dozens of collectors operate in each region. They operate out of small storefronts with some warehouse space. Some are attached to stores or money exchange operations. Typically, they will have a storage area with a scale and enough space to store around one truckload (16 MT) of field-grade hazelnuts. The collector will inspect the bags of nuts and probe the interior for rocks or foreign materials. Collectors will test a random sample of each bag to look at the percentage of empty shells. This is a huge problem in the Georgian hazelnut business. Inshell

buyers abroad complain about the Georgian origin because of a high percentage of empty shells. The collector will pay the grower with cash, and reportedly pay a premium of up to 5 % for quality (large size). There are no real specifications that they look for, rather the quality appreciated by their packer customer. Hazelnuts are shipped by car of small truck to local packers. There is no real pattern of which packer they serve or how they choose a packer. It might be that they talk via cell phone with packers and play the field to know who needs what where. It was discussed that some collectors are actually speculators. They buy cheap and hold product and store until there is a desirable time to sell.

INFRASTRUCTURE PROBLEM

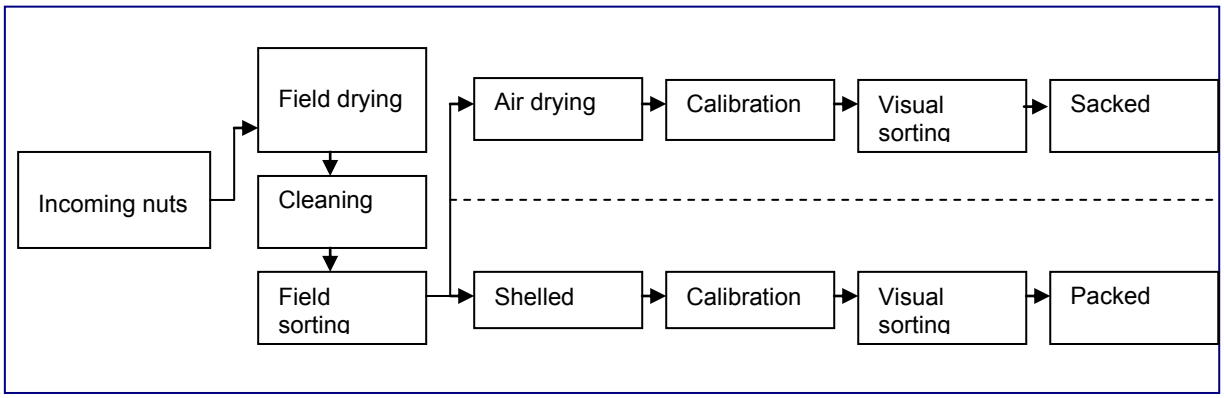
Perhaps the current shotgun approach to collecting and sourcing is the root cause of many problems facing the Georgian hazelnut industry. If you look at the Oregon structure (Exhibit X) note that there is a long-term direct relationship between the packer and the producer. In Georgia, there is a middleman collector, who plays the field and keeps the producers one step removed from the packer. In Oregon, and other nut industries, such as the California walnut and almond industries, there is a well-established and formal and informal linkage between producer and packer.

- In Oregon, growers work with the packer on the necessary quality and product, and receive immediate feedback and rewards for good products (size, moisture etc.). In Georgia, the intermediary takes any and all products and is the judge and jury on payment.
- Oregon packers give growers a monetary incentive for meeting and exceeding specific quality specifications.
- Oregon packers have specific year-to-year requirements and can work with a producer base on raising production to meet goals.
- Oregon packers serve as an extension outlet for new technology, production practices, fertilization and other improvements.

This will be a very difficult adjustment to implement, and would involve pinching out intermediaries from the nut business. Perhaps, these middlemen could be converted to become more or less buying agents for individual packers. Without a producer-packer relationship, it will be quite difficult to implement change in the hazelnut business in Georgia. With a structure in place, changes could occur which would result in raised quality, and more importantly, increased production of hazelnuts in an orderly manner.

PRODUCT AND MARKET SELECTION

The hazelnut can go to one of two different market paths: inshell and shelled. It is interesting to note that the processes used throughout Georgia are almost identical to that in all other areas of the hazelnut-producing world.



In this section, the process was reviewed, and some differences and areas of structural adjustment that could be implemented were identified.

INSHELL

The inshell market is a lucrative business that requires far less packer input than the shelled area. In addition, the packer is selling 100 percent of product and not relegating shell to cogeneration use. Product for the inshell market is normally different than that of the shelled in that the market looks for big round nuts, clean surface and zero blemishes. For shelled product, size of the nut meat kernel is the main concern. The inshell market is a tricky business with small windows of opportunity, a few trading entities and a lot of chance for making or losing big money. The Georgian packers are getting closer to the inshell market, and will need to learn the nuances of the business in order to play the game.

The hazelnut season has peaks and valleys in production and pricing. This is based on a number of factors:

- **West European Inshell Market.** Besides the Chinese trade of jumbo inshell nuts and Balkan Ramadan season (Bosnia, Kosovo, Albania, Turkey, etc.) – the only real market for this product is the Christmas market in West Europe. Countries such as Germany, Holland, Belgium, Switzerland and Austria, all have long-standing inshell nut traditions associated with Christmas time. This is not a hazelnut-only tradition and it includes walnuts and other inshell nuts. A whole culture has developed around this tradition, including nutcrackers, nonfood decorative use and cracking rituals. Because of the importance of the inshell trade, most nut traders in Rotterdam and Hamburg all have very rigid buying criteria that must be followed. Perfectly dried Inshell nuts must be landed in the key markets in early October which creates rush to match the demand. For this purpose, specific markets and cultivars of hazelnuts are selected and propagated to provide for an early harvest, lower moisture weight at harvest, which will accelerate the amount of time a hazelnut will take from harvest to market.
- **Moisture content of incoming nuts.** It is widely known that eastern Georgian hazelnuts are harvested with lower moisture content. Although the percentages may seem minute, they are actually quite significant; in that a packer can more rapidly dry an inshell nut for market. This takes less energy time and input and a packer can gain more than 10-20 % premium by hitting the inshell market just right.

- **Chinese Buying Patterns**. Each year, traders from the People's Republic of China, source the entire world supply of large sized inshell hazelnuts. Oregon in the USA is the main producer of this product. However, the Chinese are always on the lookout for alternative suppliers to supplement the Oregon production. The Chinese trade is actually Hong Kong and South China based, yet the usage market is North China. Hong Kong ~~-s~~ister" companies conduct the actual transaction and land the inshell nuts at the port of Hong Kong. The nut are transshipped to Chinese sister companies who warehouse nuts in Guangdong province, mainly in the Zhuhai area. The main users are the nut roaster trade. These are a group of 10 or so companies who roast inshell nuts and bag for the north Chinese markets mainly in Beijing, Dalian, and Tianjin cities. The product is roasted and the shells crack allowing infusion of flavors, such as salt, *li hing* powder (salty plum) and others into the interior nut. The product is sold in foil pouches, as well as bulk in wet markets. Typically, all inshell nuts, including almonds, hazelnuts and even cashews are identified as USA or California origin. This is despite the fact that cashews are not even produced in the USA. In the past, the Chinese buyers have visited Georgia, and according to most packers, they had very poor results. The Chinese made great demands, on quality, credit on goods, and just bad and rude behavior in general. It is interesting to note that when queried the Chinese concerning Georgia, each buyer has a similar impression of Georgia which should be taken into consideration: They believe that the Georgian product may be cheap, but not a good value because there is too high a percentage of empty shells in each order.
- **Location of plants.** As a remnant of the old system, some plants are in areas far from hazelnut production. Some smart companies are building plants in the areas.
- **Unique varieties**. Several packers mentioned that there were specific regional differences and some exquisite types of hazelnuts produced in the East of Georgia. This would give Georgia some interesting potential for developing appellations and specific branded products, such as the way that the Iranians have done with their almond crop. Some varieties are valued at more than 80 percent above conventional nuts.

SHELLED HAZELNUTS

Georgia produces a world-class shelled hazelnut. The shape, soundness of the kernel, adhesion of the skin and other attributes make it a most desirable product. All Georgian producers who were visited, utilized similar or same flow process, which included drying, cracking, calibrating and packing. They also segment out co-products, such as hazelnut meal and have developed the basics of further processed items, such as roasted, blanched, sliced, diced and meal.

- **Sizes and classifications**. Georgian producers have the size and calibration system down pat. This is the main descriptor for buyers, concerning the screen sizes that a product will not fall through. This terminology is very adequate, yet there are some concerning about the shape of some Georgian hazelnuts, which are an oblong shape due to nature. This would distort the screen size. We should consider alternative size grades, such as pieces per kg, which are used in the confectionery industry as well.
- **Packing**. The standards packing methodology for hazelnuts for the food industry is the cardboard box with a blue plastic poly liner. Typically, the size will be 13.5 kg. This depends on the size of the kernels. Almost all production Georgia leaves the country in clean jute bags. This is a wonderful throwback to the old days, but for

sanitary reasons, we must advance to food grade containers. In fact, there are many advantages to the corrugated box.

- Due to the cube dimensions, a packer can pack up to 1/3 more hazelnuts in an ocean container or truck trailer. They can be stacked higher have sheer strength.
- Cases load easier on a pallet.
- Hazelnuts will not absorb jute particles and the plastic case liner is sanitary and of food grade.
- Cardboard cases cost about the same or less than clean jute bags.

- **Emphasis on further processing**. Several Georgian factories have new roasting and other equipment and a few are producing new items. This is a wonderful advancement, but at the same time, it is clear that the most useful place for hazelnuts will be in the whole kernel market and this is what the Georgians do quite well. The hazelnut has a perfect antioxidant barrier in the adhering skin and this keeps the product fresh for long periods of time. To roast, blanch, and grind will immediately accelerate oxidative rancidity, which is the enemy of all nut producers and buyers. It is best to keep the whole nuts in skin as long as possible and make product to specs for customers. In short, it is a good strategy to focus on what is best and not get carried away with the co- and by-products.
- **Terminologies for value-added products**. Georgia needs to establish standard terminologies for further processed items to ensure buyer understanding. This includes sliced items, ground, blanched, etc. The recommendation and development of a technical brochure that shows the standard offerings across the board would be beneficial. This would include photographs, size descriptions and shapes.

Activity:

- Development of technical specifications for Georgian hazelnut offerings with terminologies, size, shape, color and other specifications.
- Provide a market analysis of potential sales in various categories, including requirements, formats, packing and potential volumes required. This will give the Georgian producers an idea of target markets and goals for market development.

WORKFORCE ENHANCEMENT

OREGON GRADE STANDARDS

FILBERTS (HAZELNUTS) IN SHELL

(effective August 25, 1975)

OREGON NO. 1 GRADE. –Oregon No. 1" consists of filberts in the shell, which meet the following requirements:

1) Similar type; and,
2) Dry
3) Shells:
    a. Well formed; and,
    b. Clean and bright
    c. Free from:
        i. Blanks; and,
        ii. Broken or split shells.
    d. Free from damage caused by:
        i. Stains; and,
        ii. Adhering husk; or,
        iii. Other means.
4) Kernels:
    a. Reasonably well developed; and,
    b. Not badly misshapen.
    c. Free from:
        i. Rancidity;
        ii. Decay;
        iii. Mold; and,
        iv. Insect injury.
    d. Free from damage caused by;
        i. Shriveling; and,
        ii. Discoloration; or,
        iii. Other means.
5) Size: The size shall be specified in connection with the grade in accordance with one of the size classifications in Table 1.
6) Tolerances: In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are permitted as specified:
    a. For mixed types: 20 percent for filberts which are of a different type.
    b. For defects: 10 percent for filberts which are below the requirements of his grade: Provided that not more than one-half of this amount or 5 percent shall consist of blanks, and not more than 5 percent shall consist of filberts with rancid, decayed, moldy or insect injured kernels, including not more than 2 percent for insect injury.
    c. For off-size: 15 percent for filberts which fail to meet the requirements for the size specified, but not more than two-thirds of this amount, or 10 percent shall consist of undersize filberts.

CERTIFICATION AND STANDARDS ATTAINMENT

Because most Georgian producers are a step removed from end users, such as major candy companies, the product offerings are only measured by informal criteria agreed between the European partner and Georgia packer. In other producing regions of the worked, industry-

wide quality and grading standards have been implemented which raise the product quality to world standards and give end users confidence in purchase.

QUALITY STANDARDS

In Oregon, anyone can produce hazelnuts. However, in order for hazelnuts to be marketed, they must meet USA federal government (USDA) standards. These standards were implemented decades ago at the insistence of growers, packers and end users as a way to bring order to the marketplace. USDA standards are the basic standard and all products must exceed. The standards are part of public law and cover, size, defects, color and many of the concerns of the shelled and inshell buyer (attachment Oregon Standards).

INSPECTION AND IMPLEMENTATION OF STANDARDS

The nut industry has an inspection mechanism in place to implement quality standards. In the walnut industry, this is the Dried Fruit and Treenuts Association (DFA), but other inspection services can also be used, such as the Society General Service or others. Packers pay a per ton inspection fee and a DFA or USDA inspector is present at all packing facilities. A random sample of incoming nuts is taken and product is graded or failed for human consumption. Packers use this incoming inspection as the basis for payment to growers. Outgoing inspections designate the nut by grade and are the basis for market pricing by buyer and seller. A tag or sticker is placed on all outgoing cases of shelled nuts and sacks of inshell nuts. This tag is sought after by buyers around the world as an assurance of quality.

RECORDKEEPING

As part of the incoming inspection, records are kept by the packer on intake nuts. Test samples are kept and this ability to trace the nut to a grower intake lot becomes a very important factor in satisfying end user requirements for after reception traceability. Packers can monitor grower quality and pay the appropriate premiums. Most importantly, they can rapidly trace lots to the grower when there is a quality dispute or recall.

DISPUTE RESOLUTION

The quality inspection becomes a business tool for the packer and a means of setting and avoiding disputes. In talking with Georgian packers, they are always in trouble when shipping to new markets, such as the Gulf, India and China. The product grade and inspection certificate, as well as test samples become an important tool for avoiding frivolous quality claims and for setting legitimate disputes.

ORGANIC CERTIFICATION

The value of organic certification has been debated by buyers for years. What is certain is that a number of the new buyers, in places like Asia, Canada, South America and Australia are all asking for organic. Georgia, of course is an organic ~~is~~land," and growers do not utilize pesticides and herbicides in hazelnut production. The question is posed, should we capitalize on the organic nature of Georgian hazelnuts.

Certification on inshell California walnuts shipped to Georgia for reprocessing

Advantage: Georgian hazelnuts are definitely organic.

Disadvantage: Because of the small and disorganized structure of the grower base, it would be quite difficult and expensive to certify large combined lots of hazelnuts destined for a packer under the current system. If packers did deal direct with producers, this would be much easier to implement. But currently, the collector system does not work for inputs back down the value chain.

In talking with buyers, they do ask for organic as a wish, but would also be quite satisfied with products which –although not technically certified by a certification body – are logically organic, natural. It is recommended that there is investigation held for the use of terminology that describes the organic yet not certified nature of Georgian hazelnuts. ~~-G~~eorgian Natural." ~~-G~~eorgian Supra."

Activities/Recommendations:

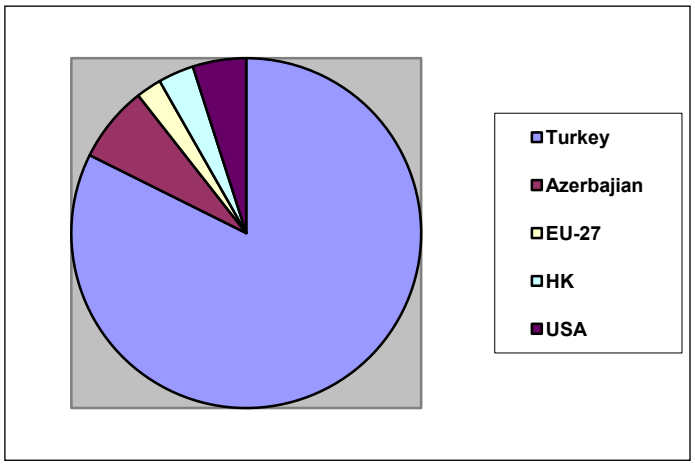
- Development of a DFA like organization in Georgia, utilizing the expertise of a visiting expert from the USA to help establish. This would include development of plant inspection guidelines, product specification and inspection system and certification.
- Consultations with individual plants with nut production expert to show how to improve quality from within, raising the standards of cleanliness and production efficiencies to higher levels.

BUSINESS MANAGEMENT IMPROVEMENT

While visiting numerous plants in Georgia, it was noted that they are producing a fine product under very difficult conditions and little guidance. (It is the notion that the companies are currently adequate to their ~~-p~~artners" as suppliers of raw materials that must be reprocessed in Western Europe. The Georgian hazelnut industry needs a quality improvement guide and framework. Perhaps a best practices model from the DFA of California, which is the premiere food quality and plant inspection service worldwide, can be

used. In the 1880s, California's dried fruit packers founded the DFA as a means of preventing disputes with overseas buyers. The DFA concept developed a 2000-point system for plant cleanliness and operations, which covers all aspects of the dried fruit and nut business. The organization inspects most of the fruit and nut companies on the West Coast of the USA, and packers fiercely compete to get the 1800 Club certification, which is recognized by confectionery and food industry buyers around the world. Perhaps the DFA could consult with the Georgian hazelnut industry to establish a similar organization, which could provide the framework for raising quality plant operations worldwide. The organization could also become a contracted inspection service as it is in the USA. If run properly, this organization should become an independent and self-sustaining entity with a board of directors.

2010 Exports



Activities/Recommendations:

- Development of a DFA like organization in Georgia, utilizing the expertise of a visiting expert from the USA to help establish. This would include development of plant inspection guidelines, product specification and inspection system and certification. Note that the organization has a new name, American Council for Food Safety, which shows the initiative to become more than a California Nut organization. The former director, Rich Novy is now an independent consultant available for consultations as well.
  - http://agfoodsafety.org/

LINKAGES & PARTNERSHIP

The treenut business in the world is a tight knit group of packers, handlers, importers and end users. When looking at the cohesiveness of the group – for example, under the umbrella of the International Nut Congress, it is easy to say that: anyone who needs to buy hazelnuts – knows where to get them. The world nut handlers, such as the Pont Brothers

(Borges) in Spain, Bessana Nut (Italy), George Goeck (Germany) and other such companies do a tremendous job of handling a huge quantity of nuts and hazelnuts in particular. But, the world market is also much larger and a whole end user base abroad is un-serviced and willing to try new sources such as Georgia.

LINKAGES

We will go beyond the European market and match Georgian hazelnut packers with ~~"r~~real" substantial customers in markets that will not interfere with their current business relationships. This will include companies in Canada, USA, China (shelled), Central America, Brazil, Mexico, Southeast Asia and other markets. The companies suggest that they are eager to find new direct sources, and are willing to come to Georgia, work with the packers on quality improvement and marketing strategies.

IMAGE DEVELOPMENT

We will place Georgia on the world tree nut map, and publish an article with photos in the Germany food technology publication Food Marketing and Technology. This will be read by major end users and buyers.

ONLINE PACKER LIST

Establish a packer list as a means for reaching packers and individual products. The world candy customers are bigger than any individual packer in Georgia. We need to establish a packer list online that includes product offerings and e-mails for contact.

TECHNICAL ASSISTANCE TO PACKERS

We will assist the packers in the field to help them find new customers and execute transactions. This will include individual consultations, ongoing assistance and advice on sampling, pricing, collections and sales.

TECHNICAL BROCHURE

The Georgian hazelnut industry needs a flagship document that has Georgian specific technical information, including the production region, products offered, photos, specifications and contact information.

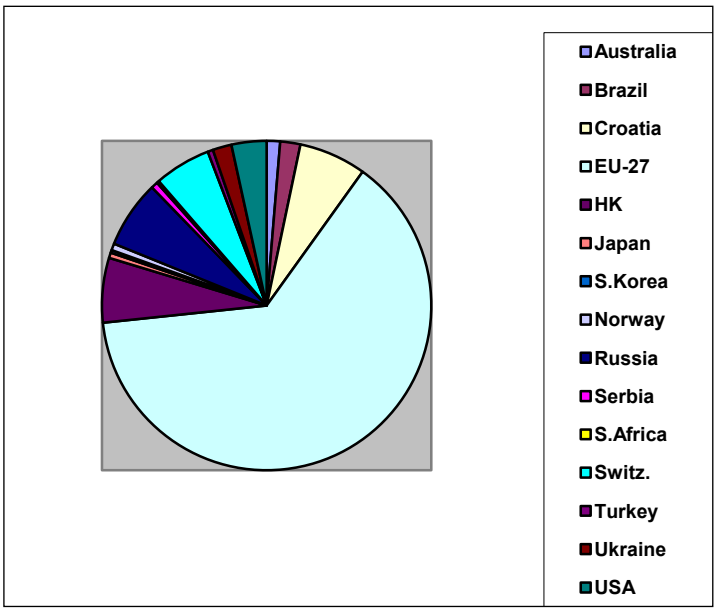
- Size and color chart.
- Product specifics and Georgian terminologies: natural, blanched, roasted, etc.
- Background on the industry: not technical but very important for understanding.
- Information on Georgian hazelnuts: natural, no pesticide use and term for ~~"u~~ncertified organic."
- Packing sizes available: very important information for buyers.
- Georgian Commitment to quality: information on quality improvement programs listed in another section of this document.
- Would suggest making two technical specification documents: inshell and shelled (kernels). The inshell market is quite simple in requirements.
    - Georgian size and shapes
    - Processing, drying and cleaning
    - Moisture content

- Georgian quality commitment. (Hit the hollow nut problem right on the head and list initiatives in place to ensure valued product).

Activities/Recommendations:

- Bring qualified buyers with a long-term interest in working with the Georgian producers, into the country in a harvest-time visit . This will result in immediate sales, and long- term communications and real partnerships for future growth. Specific activities are listed above in sections 7.1 to 7.4. With these linkages will come valuable technical assistance.

Shelled Hazelnut Imports. EU is dominant importer.



CONCLUSIONS/RECOMMENDATIONS

Recommendations have been made in individual sections. But, overall it is recommended overall that to help Georgian producers enter the 20th century with key trade contacts in regions of the world. These new buyers will help move hazelnuts to new markets in significant volumes and will work with Georgian suppliers on ascension to real world standards and specifications.

VALUE-ADDED TASKS

Market analysis – The world hazelnut market, like other treenuts, such as almonds, walnuts and pecans, is a demand-driven specialty commodity. There are two major segments of the industry: inshell and shelled. Although many channel partners or intermediaries are active in the trade of both, the end users are totally separate.

ANALYSIS OF CURRENT AND PROSPECTIVE MARKETS OF OPPORTUNITY

Most inshell hazelnuts are either shipped to Europe for Christmas time or to China for roasting. On the shelled side, although there are a number of different supplier nations and regions, Turkey is the main entity and focus of buyers. The customer base is quite small and most products go to the confectionery industry for a number of long established candy products that require hazelnuts, hazelnut paste and kernels. Consumer packs of hazelnuts, foodservice, dairy use and other applications are smaller, yet are quite interesting for market development and are a focus of hazelnut producers in Turkey and elsewhere. Currently, almost all trade of hazelnuts is locked up by a small number of suppliers and intermediaries (mainly in Hamburg, Rotterdam) who have long established relations with the major world confectionery companies, such as Ferrero, Mars, Nestle and Nutella.

LIST OF POTENTIAL BUYERS

The current universe of hazelnut intermediaries and buyers is quite small. Here are a few leaders.

Country	**Contact**
United Kingdom	CG Hacking Co. Mr. Christopher Hacking, Chariman Calverts Buildings, 50 Borough High Street, London, SE1 1XW, United Kingdom Tel: + 44 (0) 207 407 6451 Fax.: +44 (0) 207 407 300 Email: ghacking@cghacking.com Web site: http://www.cghacking.com
Spain	BORGES, S.A Marti Jordi C/. Flix 29, 43205 Reus, Spain Tel: +34 (977) 30 90 00 Fax: +34 (977) 77 20 52 Email: info@borges.es Web site: http://frutossecos.borges.es
Italy	Besana Nut Pino Calcagni V. Besana S.p.A. - Via Ferrovia, 210 - 80040 - San Gennaro Vesuviano (NA) – Italia

Country	Contact
	Tel: +39 081 8659111 Fax: +39 081 8657651 E-mail: info@besanaworld.com
Germany	Max Kiene GmbH Oberhafenstraße 1 20097 Hamburg, Germany Tel: 040 309655-0
Belgium	*Q.M. BVBA* Mr. *Frank Vaerewijck,* Director Scousele 30. B-9140 Steendorp. Belgium. Tel: 32 (2) 711 0895 Fax: 32 (2) 711 0879 E-mail: q.m.sales@innet.be
Netherlands	*van de Sandt B.V.* Kleiweg 307. 3051 XR Rotterdam, The Netherlands. Tel: +31(0)10 418 2060. +31(0)10 422 1177 E-mail: info@cvandesandt.com. Web site: www.cvandesandt.com
Australia	MWT Foods Pelaco Building Ground Floor, building 2, 21-31 Goodwood Street, Richmond, Victoria Australia Tel: +61-3-9420-2900 Fax: +61-9421-0507 Email: info@mwtfoods.com Web site: http://www.mwtfoods.com
Germany	Bösch Boden Spies

Country	Contact
	Lippeltstr. 1, Hamburg, Germany Tel: +49-40 333016-66 Email: info@boesch-boden-spies.com Web site: www.boesch-boden-spies.com
Canada	*Balcorp Limited* 4103, Sherbrooke Ouest Montréal, (Québec), Canada H3Z 1A7 Tel: (514) 939-0909. Fax : (514) 939-0777 Email: nuts@balcorp.com
France	Raul Gamon Somervom SRL, 12 Rue Marbeuf, 75008 Paris Tel: 01 40 70 94 50 Fax: 01 40 70 94 80

INTERVIEWS WITH BUYERS (COMPLETED)

A number of buyers of Hazelnuts were interviewed. In doing so, it validated the fact that the large entities are already well tied in with other Turkish other suppliers. For this purpose, it is important to operate outside of the current structure and work on new markets.

- Singapore: Ken Davis, Spectrum In gradients
- Japan. Toyo Nuts, Kobe
- Canada, All Gold, Toronto
- Germany, DIA, Cologne
- Costa Rica, Resosco, San Jose
- Others

DESCRIPTION AND STRUCTURE OF MARKETS

The world trade of hazelnuts centers on a very few large trading companies who have long-established relationships with confectionery companies who use a majority of hazelnut production. For example, there are 10 more traders in Hamburg and Rotterdam, and they all have offices in the same neighborhoods near the port – sometimes even in the same building. These companies are in very tight formation with buyers and have decades of business on the books. The new companies that are listed are on the fringes and are currently already sourcing from secondary sources or are looking to fill requirements for new customers. The new import companies have direct linkages with the end users, have technical service capabilities and are in a position to develop new markets for hazelnuts.

Where they lack in huge volumes, they make up in willingness to work with new suppliers and provide assistance and support. This will be a recommended channel for Georgian hazelnuts.

GEORGIAN PRODUCTION CAPACITY

Georgia is currently a small player in the global hazelnut industry. Being attached to Turkey, the main player, Georgia fills supply needs in this country and has direct field grade and raw material and semifinished product shipments to main European markets. In addition, the production is stable and limited to small farming activities, in which packers are supplied by farmers through a middleman and direct sales to packers. This situation is seriously limiting the development of new production. Georgia has substantial amounts of land available for hazelnut production and some of this is in areas where discontinued tea production as occurred. Other acres are in the East and in new and nontraditional hazelnut production areas. The small producer, handler and packer arrangements does not seem to stimulate new plantings and business. My guess is that this is because the middle men are regulating supply to keep pricing up to the packer. Packers are struggling to get supply. The supply pull will not begin until packers start to source directly from producers. They will initially compete for producers, and provide incentives like higher prices and some serviced and technical support. In time relationships will develop and packers will build bases of production which will grow as the market grows.

The exception to the above described situation is the big farming activity from investors and Fererro. The large confectionery company has jumped into the Georgian market seeing the available land and potential and is producing on its own with substantial plantings in the ground. Other private investors have developed hazelnut plantations in the East, and unfortunately they do not seem to be experts in nut production and there is not much progress or prospect for success in the future.

Nut Aggregators & Processors

	Company Name	**Contact person**	**Phone No**
1	Nut producing and processing company	Besik Akhaladze	899170698
2	Kartu Group HCP	Irakli Amanatashvili	895222216
3	LLC Keskia	Fridon Kodua	899515194
4	LLC Tskaros Tavi	Koba Gvazava	877431517
5	LLC Didinedzis meurneoba	Goneli Kukava	899584234
6	LLC Kristali	Dato Lashqarava	877419587

7	LLC Kartuli Sio 2000	Begi Sioridze	899989090
8	LLC GN Company	Mokho Khomeriki	899115370
9	LLC Argo Natia	Mamuka Todua	
10	LLC Dioskuria	Ronaldi shelia	899299845
11	LLC Impex	Levan Jorjikia	877544445
12	LLC G-Nut	Shota Bukhaidze	877777374
13	LLC Georgian Nuts	Kakha Bochorishvili	877797574
14	LLC Fima Georgia	Aleko Motserelia	899953737
15	LLC Megobrebi da Kompania	Paata Erqvanidze	899180803
16	LLC Kardiko	Tengo Arqania	899519214
17	Ferero International	Merab Murgulia	899583658
18	I/E Badri Lorchoshvili	Badri lorchoshvili	899507823
19	LLC Agro+	David Quhilava	
20	LLC Verdzi	Gela dzidzava	895343358
21	I/E Tskvitava Paata	Badri Lorzoshvili	899508852

IDENTIFICATION OF POLICY AND REGULATORY CONDITIONS TO IMPROVE SECTOR

The hazelnut sector is a priority agricultural commodity in Georgia and has received a substantial amount of attention from the central government. It is also a priority item for assistance from donor nations, and assistance programs. From a policy standpoint, I would recommend development and formation of a ―marketing order" type of program, which would allow development activities and controls, which could benefit the entire sector. Modeled after the Oregon Hazelnut Committee in the USA, the program could address three different areas:

5. Quality. A law would be established to define quality standards for Georgian hazelnuts. This would include size, color, and other criteria that are important to the

buyers. In short, anyone would be able to grow hazelnuts in Georgia, but only those which meet the mandated quality criteria could be marketed and exported. The law would define an inspection mechanism at the packer level, as well as fines and consequences for violating this aspect of the marketing order.

6. Research. The law would allow for identification and funding of research to serve the needs of the Georgian hazelnut industry. This would include research and development of new plant stocks, new products and processes and economic research.
7. Promotion. The law would allow funding of market development and promotions in the domestic and world markets, including market research, exhibitions, advertising and trade missions.
8. Control. A board would have powerful marketing functions to create order in the marketplace. This includes setting marketable supply, reserve pools, tools for limiting product on the market, such as green drops (payment for destruction of the product on the tree) and other mechanics.

The marketing order would be funded by an assessment per metric ton, on product received by packers. The assessment would be passed along to the end user, and in the case of Georgia, there is adequate room for price increases. In the USA, assessments for commodity boards range from one cent per lb for honey to around $12 per ton for blueberries. Most products, such as almonds and walnuts, are assessed at around $24-36 per ton. This would cover operating expenses of a board office and a collection mechanism. A board would be formed which would represent the geographic profile of the industry and would be selected in an election by industry stakeholders. Typically, this would be the growers, but could also be the packer who in turn represents a producer base.

GAP ANALYSIS

Where we are	Where we want to be	What is stopping us from getting there	What we can do to get there
Production: small stable production, little growth.	Want to achieve at least 3-5% increases in production.	No ability for packers to stimulate production due to middle men (collectors) keeping the producers hungry.	Encourage direct relationship between packers and longer term and steady supply relationships that can be built and developed.
Most products are sold ~~as~~ is" to intermediary customers who do reprocessing.	Want to achieve market price sales of hazelnut products to real customers based on quality and appropriateness for the end user.	Georgian plants are deficient in many quality control attributes and practices due to lack of knowledge of end user standards.	>Engage Georgian producers with real customers who can help advise on quality steps. >Utilize food safety and processing experts in market to work with companies to fix gaps. >Implement ongoing quality and processing standards certification program.
Few packers offer product in a form and condition for the end market.	Georgia should have a wide range of offerings in proper world packing materials.	Current solo customers are content to get cheap prices and do not push for world class packaging and products.	Provide consul to industry on market requirements, demands and product forms that are needed in the marketplace and show how to

			get there.
Although most product is produced without pesticides, there is no organic certification in Georgia.	Georgia should have a small yet significant organic hazelnut category and thus could well differentiate this origin in new markets for higher prices and growth outside of the commodity business.	Because of the current structure where packers are removed from growers by collectors, there is a difficulty to get organic certification for such a large grower base.	We should work with a few larger packers with a large direct grower base to begin certification process to obtain new organic production for the marketplaces. At the same time, we should develop a terminology for Georgian product that is certainly organic yet not certified. This would be immediately accepted in some markets and would add value.
Georgian product has little or no image and awareness in the world tree nut community.	Georgia should obtain a unique and positive identity for hazelnuts – as an original home of hazelnuts, a provider of unique cultivars and products.	Georgia is close to Turkey, which is the leading producer in the world, and current customers come to Georgia.	Georgia should gain a presence in the International Nut Congress, as well as gain awareness through participation in international food exhibitions, such as International Sourcing & Marketing (confectionary) FOODEX, Japan, Food and Hotel Korea trade articles in European, American and Asian trade magazines and online information portals.
Georgian packers lack the fundamental knowledge for succeed in new export market transactions.	Current single customer ~~-p~~artner" system has not required packers to learn and implement a lot of the basic practices and fundamentals of import export business.	Georgian producers need basic skills in sales prospecting, sampling, pricing, dispute resolution and other skills to work in new markets.	We should implement seminars and consultations with individual packers on export transactions, sampling, prospecting, pricing, dispute resolution and collection.

Recommendations (Completed) followed outline of project tasks as provided to ensure that the recommendations fit into the project structure.

B. ADDITIONAL INFORMATION

DEFINITION OF TERMS

Collector – A person or company which is not a producer of packer, which is located in a stationary location, normally a town near hazelnut production, which receives and buys incoming deliveries of hazelnuts from producers.

Handler – Typically is the first company who handles raw material from field. In Georgia, this is also called a collector.

Packers – a company or individual who receives raw material and transforms product through cleaning, processing for shipping to customers.

Exporter or street broker – A person or company who works with a packer independently as an export seller of hazelnuts. Normally is allied with one or two packers.

EXHIBITS/PHOTOS

New drying chamber

Hazelnut nursery, East Georgia

New three-year old plantings in East Georgia

New plantations in East Georgia

New generation of hazelnut processors in Georgia. Tom Payne on Right.

Hand cracking of California Walnuts in plant in Zigdidi, West Georgia. Inshell walnuts are shipped in sacks to Georgia for hand cracking for the French market. This is done alongside conventional hazelnut processing

Perfect hand cracked California walnuts

Hand cracking of California walnuts in Zigdidi, West Georgia

Sorting of hazelnut kernels after cracking

Collector checks probe of inshell hazelnuts for hollow nuts as well as foreign object

Boss collector inspects inshell nuts

Entrepreneurs with new roasting equipment

Drying tower

New drying tower

Cracking machinery

Inshell walnuts ready to ship. Note, stacked directly on floor!!!

Large inshell walnuts ready to ship to China.

“Big Boss” at his new factory in Zigdidi.

Shelled hazelnuts

Processed shelled hazelnuts ready to ship on pallets.

Blanched hazelnuts in vacuum pack

Hazelnut meal in vacuum pack

Shelled product for Middle East customer with Halal certification

Variety of product offerings in vacuum pack for samples and evaluation

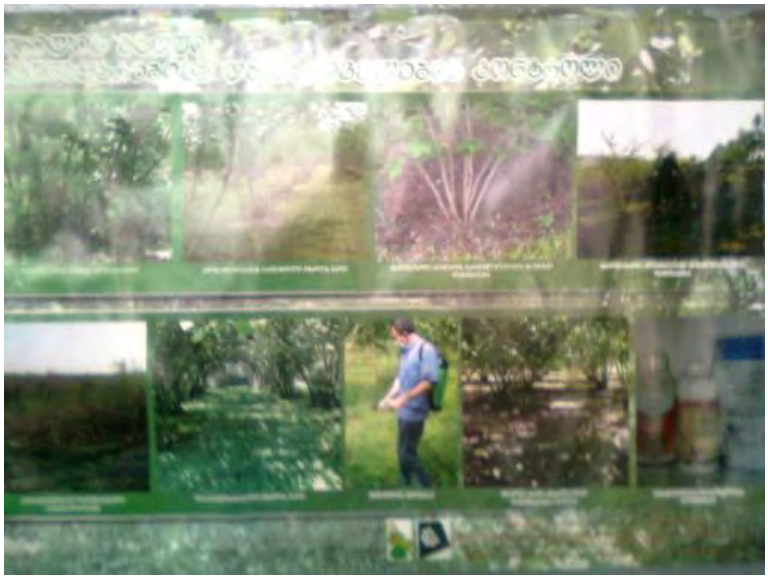
Loading of truck in Zigdidi

Incoming hazelnuts loaded into dryer

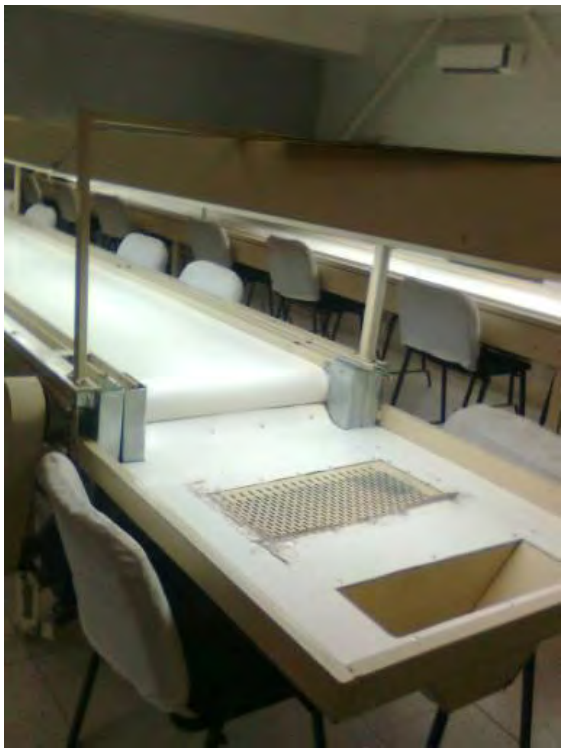
Sorting of shelled hazelnuts. Note hairnets.

Properly packed product ready to ship on pallets

Blanched hazelnuts in vacuum pack blocks.



Posters on proper propagation of hazelnuts.



Sorting table, note unprotected fluorescent tubes!

New cracking machinery

New inshell dryers

Incoming inshell hazelnuts

Inshell probe. Note, notations of grower on sack.

Packer inspects incoming field-grade product.

Scale at raw material reception area at packer.

Hazelnut cracker

Outside of plant, note rodent control measures and barriers on peripheral of plant.

OREGON STANDARDS FOR HAZELNUTS

OREGON GRADE STANDARDS

FILBERTS (HAZELNUTS) IN SHELL (Effective August 25, 1975)

OREGON NO. 1 GRADE. ~~O~~regon No. 1" consists of filberts in the shell which meet the following requirements:

(1) Similar type; and,

(2) Dry.

(3) Shells:

(a) Well formed; and,

(b) Clean and bright.

(c) Free from:

(i) Blanks; and,

(ii) Broken or split shells.

(d) Free from damage caused by:

(i) Stains; and,

(ii) Adhering husk; or,

(iii) Other means.

(4) Kernels:

(a) Reasonably well developed; and,

(b) Not badly misshapen.

(c) Free from:

(i) Rancidity;

(ii) Decay;

(iii) Mold; and,

(iv) Insect injury.

(d) Free from damage caused by:

(i) Shriveling; and,

(ii) Discoloration; or,

(iii) Other means

(5) Size: The size shall be specified in connection with the grade in accordance with one of the size classifications in Table 1.

(6) Tolerances: In order to allow for variations incident to proper grading and handling, the following tolerances, by count, are permitted as specified:

(a) For mixed types, 20% for filberts, which are of a different type.

(b) For defects, 10% for filberts which are below the requirements of this grade: Provided, that not more than one-half of this amount or 5% shall consist of blanks, and not more than 5 percent shall consist of filberts with rancid, decayed, moldy or insect injured kernels, including not more than 2% for insect injury.

(c) For off-size, 15% for filberts which fail to meet the requirements for the size specified, but not more than two-thirds of this amount, or 10% shall consist of undersize filberts.

Table 1

Round type varieties:

Size classifications for kernerls packed in containers holding more than 1 kilogram	Maximum Size Will pass through a round opening of the following size	Minimum Size Will not pass through a round opening of the following size
Giant	No Maximum	23 m.m.
Jumbo/Giant (at least 25% giant size and balance jumbo size)	No Maximum	22.2 m.m.
Jumbo	No Maximum	22.2 m.m.
Large	22.2 m.m.	19.4 m.m.
Medium	19.4 m.m.	17.9 m.m.
Small	17.9 m.m.	No Minimum

Table 2

Long type varieties:

Size classifications for kernerls packed in containers holding more than 1 kilogram	Maximum Size Will pass through a round opening of the following size	Minimum Size Will not pass through a round opening of the following size
Giant	No Maximum	22.2 m.m.
Jumbo/Giant (at least 25% giant size and balance jumbo size)	No Maximum	18.6 m.m.
Jumbo	No Maximum	18.6 m.m.
Large	19.0 m.m.	17.5 m.m.
Medium	17.9 m.m.	13.5 m.m.
Small	13.9 m.m.	No Minimum

Application of standards

(1) The grade of a lot of filberts shall be determined on the basis of a composite sample drawn from containers in various locations in the lot. However, any container or group of containers in which the filberts are obviously of a quality, type or size materially different from that in the majority of containers shall be considered a separate lot, and shall be sampled separately.

(2) In grading the sample, each filbert shall be examined for defects of the shell before being cracked for kernel examination. A filbert shall be classed as only one defective nut even though it may be defective externally and internally.

Definitions

(1) "Similar type" means that the filberts in each container are of the same general type and appearance. For example, nuts of the round type shall not be mixed with those of the long type in the same container.

(2) "Dry" means that the shell is free from surface moisture, and that the shells and

kernels combined do not contain more than 10 percent moisture.

(3) "Well formed" means that the filbert shell is not materially misshapen.

(4) "Clean and bright" means that the individual filbert and the lot as a whole are practically free

from adhering dirt and other foreign material, and that the shells have characteristic color.

(5) "Blank" means a filbert containing no kernel or a kernel filling less than one-fourth

the capacity of the shell.

(6) "Split shell" means a shell having any crack which is open and conspicuous for a distance of

more than one-fourth the circumference of the shell, measured in the direction of the crack.

(7) "Damage" means any specific defect described in this section; or an equally objectionable

variation of any one of these defects, and other defect, or any combination of defects which

materially detracts from the appearance, or the edible or marketing quality of the filberts.

The following specific defects shall be considered as damage:

(a) Stains which are dark and materially affect the appearance of the individual shell.

(b) Adhering husk when covering more than 5 percent of the surface of the shell in the

aggregate.

(c) Shriveling when the kernel is materially shrunken, wrinkled, leathery or tough.

(d) Discoloration when the appearance of the kernel is materially affected by black color.

(8) "Reasonably well developed" means that the kernel fills one-half or more of the capacity of the shell.

(9) "Badly misshapen" means that the kernel is so malformed that the appearance is materially affected.

(10) "Rancidity" means that the kernel is noticeably rancid to the taste. An oily appearance of

the flesh does not necessarily indicate a rancid condition.

(11) "Moldy" means that there is a visible growth of mold either on the outside or the inside of the kernel.

(12) "Insect injury" means that the insect frass or web if present inside the nut or kernel shows definite evidence of insect feeding.

Metric Conversion Table

Millimeters (m.m.) Inches: Millimeters (m.m.) Inches:

24.6……..... 62/64 18.6……..47/64

23.4……59/64 17.9……..45/64

23.0……58/64 17.5……..44/64

22.2……56/64 16.7……..42/64

19.4……49/64 13.9……..35/64

19.0……48/64 13.5……..34/64

OREGON STANDARDS FOR SHELLED HAZELNUTS

OREGON GRADE STANDARDS

HAZELNUT (FILBERT) KERNELS (Effective August 1, 1980)

603-51-305 APPLICATION OF STANDARDS. The grade of a lot of hazelnut kernels shall be determined on the basis of a composite sample drawn from containers in various locations in the lot. However, any container or group of containers in which the hazelnuts are obviously of a quality, type, or size materially different from that in the majority of containers shall be considered a separate lot, and shall be sampled separately.

51-310 OFFICIAL GRADES.

(1) OREGON FANCY, which consists of whole hazelnut kernels meeting the following requirements:

(a) Similar type, well dried and clean;

(b) Free from foreign material, mold, rancidity, decay and insect injury;

(c) Free from damage caused by chafing or scraping, shriveling, deformity, internal flesh discoloration or other means;

(d) Free from serious damage caused by serious shriveling, broken kernels or other means; and

(e) The size meets, and is declared as, those specified in connection with the grade, in accordance with one of the size classifications in Table I or Table II of OAR 603-51-311.

(2) OREGON NO. 1, which consists of whole hazelnut kernels meeting the following requirements:

(a) Well dried and clean;

(b) Free from foreign material, mold, rancidity, decay and insect injury;

(c) Free from damage caused by chafing or scraping, shriveling, internal flesh discoloration or other means;

(d) Free from serious damage caused by serious shriveling, broken kernels or other means; and

(e) The size meets, and is declared as, those specified in connection with the grade, in accordance with one of the size classifications in Table I or Table II of OAR 603-51-311, or is declared in terms of minimum diameter or minimum and maximum diameters.

(3) OREGON NO. 1 WHOLE AND BROKEN, which consists of whole hazelnut kernels or portions of hazelnut kernel meeting the following requirements:

(a) Well dried and clean;

(b) Free from foreign material, mold, rancidity, decay or insect injury;

(c) Free from serious damage caused by serious shriveling, or other means; and

(d) Does not have to meet any size requirement.

51-311 SIZE CLASSIFICATIONS. The following size classifications are established for hazelnuts in Oregon:

TABLE I

Size classifications for kernerls packed in containers holding more than 1 kilogram	Maximum Size Will pass through a round opening of the following size	Minimum Size Will not pass through a round opening of the following size
Giant	No Maximum	16 m.m.
Jumbo	17 m.m.	15 m.m.
Extra Large	16 m.m.	14 m.m.
Large	15 m.m.	13 m.m.
Medium	14 m.m.	12 m.m.

Small	13 m.m.	11 m.m.
Whole & Broken	No Maximum	No Minimum

TABLE II

Size classifications for kernerls packed in containers holding 1 kilogram or less	Maximum Size Will pass through a round opening of the following size	Minimum Size Will not pass through a round opening of the following size
Extra Large	No Maximum	14 m.m.
Large	15 m.m.	13 m.m.
Medium	14 m.m.	12 m.m.
Small	13 m.m.	11 m.m.
Whole & Broken	No Maximum	No Minimum

51-315 TOLERANCES. In order to allow for variations incident to proper grading and handling in each of the foregoing grades, the following tolerances, by weight, are permitted as specified:

(1) For Foreign Material: 0.02 of 1%, for foreign material.

(2) For Mixed Types: In the Oregon Fancy grade, 10 percent for kernels which are of a different type.

(3) For Defects: In the Oregon Fancy and Oregon No. 1 grades, 10 percent for kernels which are below the requirements of these grades, provided that not more than one-half of this amount or 5 percent shall be allowed for serious damage caused by serious shriveling and broken kernels, including not more than one percent for moldy, rancidity, decay or insect injury.

(4) For Defects: In Oregon No. 1 Whole and Broken grade, 5 percent for kernels or portions of kernels which are below the requirements of this grade,

including not more than 1% for moldy, rancidity, decay or insect injury.

(5) For off size: 15% for kernels which fail to meet the requirements for the size classifications specified, but not more than two-thirds of this amount or 10% shall consist of undersize kernels.

51-320 DEFINITIONS. As used in OAR 603-51-305 to 603-51-325:

(1) “Similar type” means that the kernels are of the same general type and appearance (i.e., kernels of the round type shall not be mixed with those of the long type). Color of the kernels shall not be considered since there is often a marked difference in skin color of kernels of similar type.

(2) “Well dried” means that the kernels are firm and crisp, not containing more than 6% moisture.

(3) “Clean” means practically free from plainly visible adhering dirt or other foreign material.

(4) “Foreign material” means any substance other than the filbert kernel, or portions of kernels. Loose skins, pellicles, or corky tissue which have become separated from the kernel shall not be considered as foreign material, provided that this material does not exceed 0.02 of 1% by weight.

(5) “Damage” means any specific defect described in this section, or an equally objectionable variation of any one of these defects, or any other defect or any combination of defects, which materially detracts from the appearance of the edible or marketing quality of the individual portion of the kernel or of the lot as a whole. The following defects shall be considered as damage:

(a) “Chafing or scraping” means that more than one-eighth of the surface is affected.

(b) “Shriveling” means the kernel is materially shrunken, wrinkled, and tough.

(c) “Deformity” means that the kernel is deformed to the extent that the

appearance is materially affected.

(d) “Internal flesh discoloration” means any black discoloration within the kernel. The natural brown stain which occurs within the internal cavity of some types of kernels shall not be considered damage.

(6) “Serious damage” means any specific defects described in this section or an equally objectionable variation of any of these defects, or any other defect, or any combination of defects, which seriously detracts from the appearance or the edible marketing quality of the individual portion of kernel or of the lot as a whole. The following defects shall be considered as serious damage:

(a) “Serious shriveling” means that the kernel is seriously shrunken, wrinkled, and tough.

(b) “Broken kernels” means portions of kernels of which an estimated one-quarter or more of the original entire kernel has been broken off.

(c) “Moldy” means that there is a visible growth of mold either on the outside or inside of the kernel.

(d) “Rancidity” means that the kernel is noticeable rancid to the taste. An oily appearance of the flesh does not necessarily indicate a rancid condition.

(e) “Decay” means that any portion of the kernel is decomposed.

(f) “Insect injury” means that the insect, frass, or web is present, or the kernel of portion of kernel shows definite evidence of insect feeding.

51-325 LABELING REQUIREMENTS. (1) The principal display panel of each hazelnut (filbert) container shall state:

(a) the name of the commodity, unless it can be easily identified through the wrapper or package;

(b) the name and business address of the grower, packer, shipper, distributor, or dealer, including the zip code;

(c) the grade and size of nuts in accordance with the standards set forth in OAR 603-51-305 to 603-51-320;

(d) the net weight; and

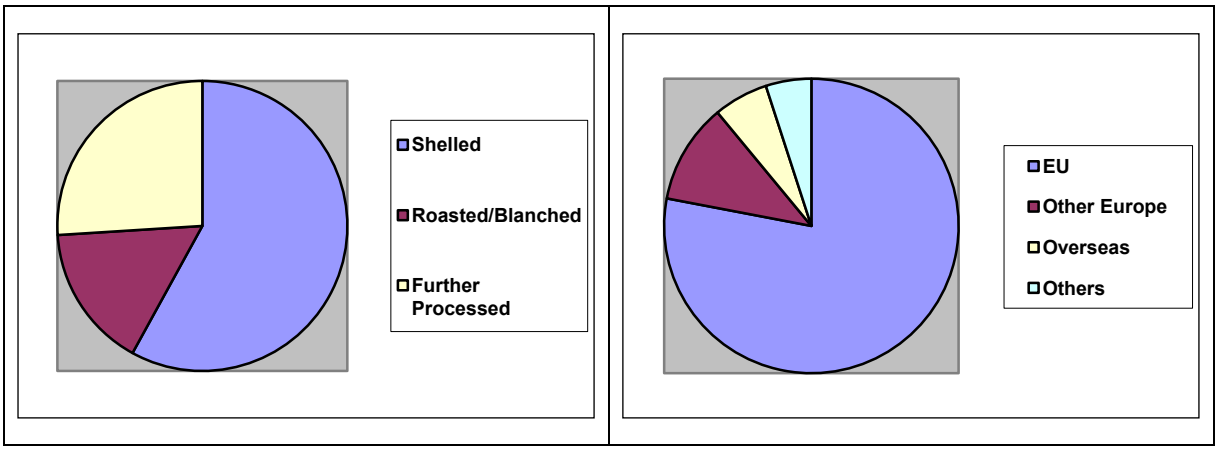
(e) the country of origin.

TURKISH STANDARDS/EXPORTS

Turkey Growing Regions	
	Turkish hazelnut are produced in two qualities: Giresun: grown in Giresun and neighboring Trabsun (highest quality). Levant: grown in other areas (lesser quality and lower price)

Region 1	Region 2
Ordu, Giresun, Trabzon, Rize, Artvin	Samsun, Sinup, Kastamonu, Bolu, Duzce, Sakaraya, Zonguldak, Kocaelli

Forms of Turkish Hazelnuts Exported	Turkish Hazelnut Exports



Product Offerings[1]

Product	End user	Comment
Inshell hazelnuts	Snack for end user	
Natural hazelnuts	Raw material for processed and fully processed	
Blanched hazelnuts	Chocolate, snacks, salting	
Roasted hazelnuts	Chocolate, snacks, salting	
Chopped hazelnuts	Ice cream, biscuit, chocolate, bakery	
Sliced hazelnuts	Bakery	
Hazelnut flour	Bakery, biscuit, ice cream industry	
Hazelnut paste	Ice cream, chocolate industry	

Turkish Standards for kernel sizes (Turkish Exporters Union)

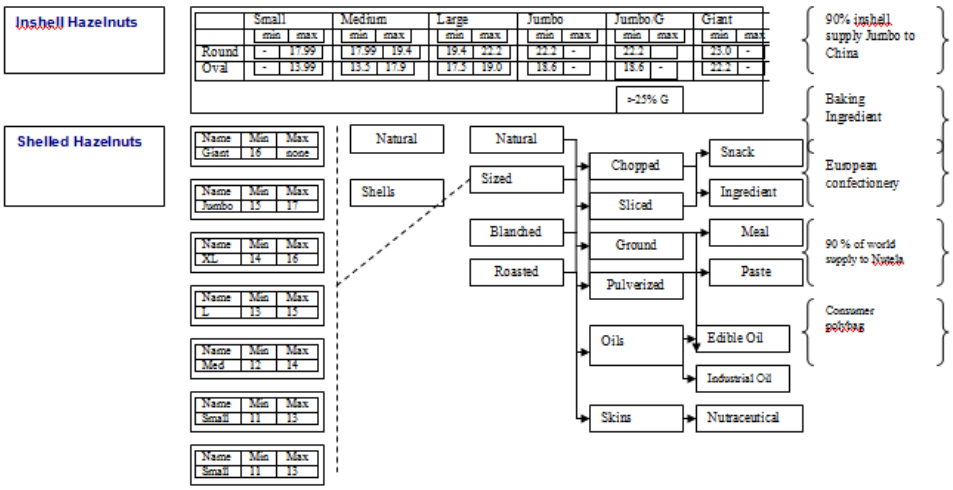
Size measured by round hole screen size	Turkish Terminology

[1] Hazelnut Promotion Group, Turkey.

9-15 mm	Regular
9-11 mm	Standard III
11-13 mm	Standard II
13-15 mm	Standard I
Over 15 mm	Standard Extra

Turkish Product Descriptions

Round	Pointed
Hazelnuts with spherical shapes which are almost same in length, width and thickness. This is the nut normally used in blanching.	Longer hazelnuts which are marketed as inshell.



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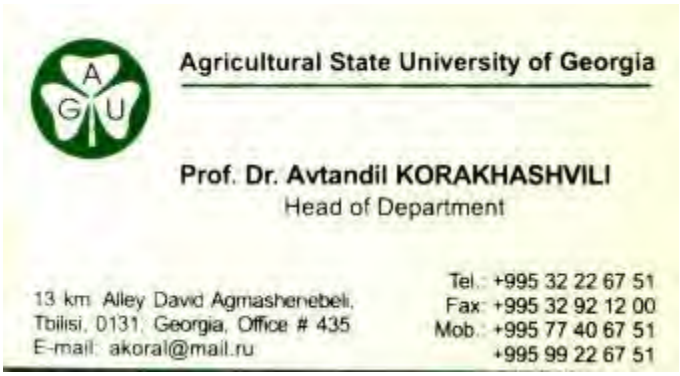
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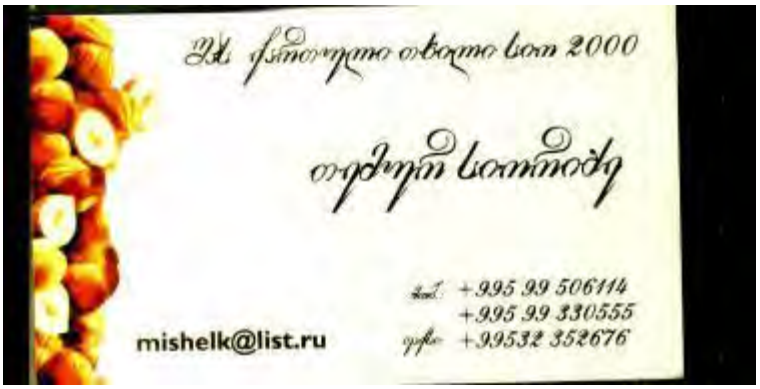
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