

**Proposed Amendments to Federal Marketing Order 982**  
**Testimony - General Introduction – Polly Owen**

My name is Polly Owen and I began work as Manager of the Hazelnut Marketing Board in 1995. The Hazelnut Marketing Board was established in 1949 as a part of Federal Marketing Order 982. Hazelnuts grow throughout the world but will only yield an economically sustainable volume of nuts in regions with good soil, a mild climate and generally near a large body of water. On a world map we see the major production area near the 45<sup>th</sup> parallel north and south of the equator. Turkey produces about 70% of the world supply while Oregon produces about 4% of the world supply. Still, Oregon hazelnuts are in demand throughout the world largely because of their size and quality. This slide gives you an idea of the larger sized U.S. nuts. It also shows the traditional way the Turkish industry dries their product – they are dependent upon the weather to ensure nuts are dried in a timely fashion.

In Oregon the production area lies between the Cascade Mountain Range and the Coast Range in the Willamette Valley. It stretches from Washington south through Oregon to Douglas County. The Oregon hazelnut industry provides 99.9 percent of the hazelnuts grown in the U.S. The hazelnut industry contributes approximately 250 million dollars to the Oregon economy annually. The commercial hazelnut industry began in 1906 with the planting of an orchard near Eugene in the southern part of the Willamette Valley. This orchard, the Dorris Ranch Orchard, is still in production today.

*1. Description of the Industry*

There are well over 800 growers of hazelnuts in Oregon and Washington. About 98% of them are considered small by the SBA definition of grossing less than \$750,000 annually. There are 17 handlers and again most all of them are also small using the SBA definition of grossing less than \$7.5 million annually. Currently the Oregon Agricultural Statistical Service indicates we have 30,000 acres of bearing age trees in production.

This slide is a graph of hazelnut production since 1995. You can see hazelnuts can exhibit an alternate bearing pattern by the large differences in yield from year to year. It is important to note that while acreage remained fairly static throughout this time, the average yield has increased. During the last 30 years the industry has been besieged with a fungal disease called eastern filbert blight (EFB). Throughout these years growers identified cultural practices to keep their trees from steep decline and also funded the hazelnut breeding program at OSU where the goal has been the production of varieties highly resistant to EFB. In 2007 a series of fungal resistant releases resulted in a dramatic upswing in acres planted. While we are not positive how many acres have been planted in that time, through unofficial surveys and mapping we believe it to be up to 3,000 acres per year beginning in 2011. This slide provides an idea of what counties have increased hazelnut acreage. Thus we are in the midst of a very exciting time for the U.S. hazelnut industry.

A bit about the amazing hazelnut tree. Even now as harvest is winding down, the catkins for next year's crop that you see here on the right, are obvious on the branches. They will elongate and shed pollen while most plants are sleeping in mid-winter. Pollen is carried on the wind and

rain to the blooms, which is the tiny red flower on the trees. Thus no bees are required as they are in many crops. At that time the trees sort of rest until late spring when fertilization occurs leading to nut development in the summer. During this period of "rest" growers are in the orchards pruning, keeping unwanted plants from robbing nutrients from the trees and treating for potential problems with eastern filbert blight and pests.

In the summer, nuts begin to form and great care is taken to ensure the orchard floor is prepared for harvest. Some growers have a short grassy floor; others like to keep the ground bare. Either way they prefer flat ground so that during harvest nuts can be picked up efficiently. A relatively new concept in the industry, many growers of young trees carefully irrigate in the summer. Most use drip irrigation targeted to the trees only. In late August the nuts turn their hazel color and growers wait for them to fall to the ground free of their protective husks. The nuts are swept into windrows and picked up with harvesters. The machines have a series of air legs that help blow away dust, sticks and debris. Nuts are conveyed into totes or bulk trailers on the farm.

They are then taken to a near-by wash facility. I mentioned before that there are 17 handlers in the industry. All hazelnuts in the production area are sent to handlers for further processing, inspection and sales. In order to get product cleaned and dried as quickly as possible the industry has numerous on-farm wash/dry operations which provide the first stop for most product. This helps ensure the quality product Oregon is known for and as you can see, is much different than how nuts are laid on the ground to dry in Turkey.

Once cleaned and dried the product goes to a handler where it is sized and then sorted for sale as inshell or cracked and sold as kernels or further sliced, diced, meal, paste or butter. All inshell and kernels are inspected by USDA via an agreement with the Oregon Department of Agriculture Inspection Service, before they are put into a channel of trade. This is an integral part of Marketing Order 982. Product must meet standards for grade and size. Copies of ODA inspection certificates are sent to the industry office where HMB employees compare them to monthly reports of the disposition of product from each handler. This way reports can be reconciled regularly through the year.

## *2. Industry Structure*

Four of the basic industry groups are housed in one office and share staff. The Hazelnut Marketing Board (HMB), formed in 1949, is charged with assuring hazelnuts meet grade and size standards, has the authority to employ volume control and also does generic promotion of hazelnuts. These slides show the forms as well as a few of the products that include hazelnuts.

The Oregon Hazelnut Commission (OHC), formed in 1951, is a quasi- State Agency funded by growers and responsible for production research for the industry. Forward thinking growers funded a world renowned research center and breeding program at Oregon State University. Not only have EFB resistant varieties been created, but concurrently, research on how to keep blighted trees in production while the new varieties were in progress was done. They also worked on the development of hazelnut micropropagation so that when new varieties were released, the numbers could be blown up quickly. These things have contributed greatly to the increased acres that have been planted recently.

The Nut Growers Society of Oregon, Washington & British Columbia (NGS), founded in 1915 is the trade association for growers, and is instrumental in the transfer of information from the HMB and OHC to the growers. It is the trade association, funded by members and vendors and works very closely with OSU Research and Extension.

Finally, the Associated Oregon Hazelnut Industries (AOHI) is a group funded by contributions and called upon when necessary to take up activities the other groups cannot do, such as lobbying.

Aside from the organizations housed together, the industry has one grower cooperative. In addition there exists a Hazelnut Growers Bargaining Association tasked with determining a base grower price each year.

### *3. Growers and Handlers*

Of the seventeen hazelnut handlers all but two are also growers. Handlers offer a variety of services to their growers including help with management plans and arrangements with vendors to get quantity discounts on chemicals and other inputs. They also have grower meetings where they have opportunity to provide input on their individual goals for marketing as well as updates on pertinent production practices. This is increasingly important with the influx of new growers that has occurred as acreage has expanded. The NGS also helps put together programs where handlers can express the need for product to be delivered as clean as possible for both the grower and the handler's benefits.

### *4. Average Farm Size? Diversified?*

Using the bearing acres, the average orchard size is 74 acres. We do not have data on the percentage of hazelnut grower that are diversified, but we know many grow other crops or are involved in other businesses.

### *5. How long can product be stored, and how long is it marketed?*

Most inshell is sold in the export market and is shipped as soon as possible after harvest. Remaining inshell and kernels are kept in cold storage and sold throughout the year. Many handlers keep inshell on hand and crack it for kernel production as needed. Ordinarily there is very little carry over product at the end of the year. Generally, hazelnuts will keep very well for 12 to 18 months at a refrigerated temperature. Product keeps much longer when frozen.

### *6. What are the main markets? Who are the competitors (foreign and domestic?)*

Our most recent industry statistics, gathered by HMB staff from monthly handler reports, are condensed in the 2015 Crop Annual Report, which has been submitted as part of the record. According to Table 9 and Table 17 respectively, during the last five years an average of 6% of the crop was sold into the domestic inshell market, 54% into the export inshell market and 35% into the kernel market.

Exports inshell sales into China, our major market, averaged 90% of the inshell exports.

Table 16 in the HMB Annual Report indicates over the five years 2011 to 2015, kernel sales into the domestic market accounted for 51% and kernel sales into the export market averaged 49%.

China is our most important inshell market an up and coming competitor is Chile who is growing varieties much like ours, harvests earlier than we do and can sell into China with no tariff. Interestingly nuts going to China are generally partially cracked, soaked in brine, roasted and sold as snack nuts – like pistachios in the U.S. Until very recently, most nuts were cracked by hand in China. For the kernel market, Turkey is the main competitor. Ninety-one percent of the imports into the U.S. over the last 10 years have been from Turkey. (Table 2 and USDA FAS)

*7. Biggest factors impacting harvest, handling, market distribution, etc.*

Inclement weather during harvest slows the entire industry down. It takes longer and more resources to harvest, clean and dry nuts when the orchard floor gets muddy. However, with the current handlers there is ample capacity to process the growing Oregon crop.

Factors for market distribution include the tariff into China and political and economic changes in Turkey. With Turkey being about 70 % of the world industry, production there automatically affects the prices for hazelnuts throughout the world. Of course, food safety issues for all low water activity products have dictated that additional steps by handlers before product is sold.

*8. Average Producer Returns of 10 Years*

According to Table 5 in the HMB Annual Report and NASS statistics, the 10 year average grower price is \$2,229 / ton or \$1.12 / pound. The five year average is \$2,690 per ton or \$1.35 / pound. Average production per acre is 1.29 tons or 2,580 pounds.

*9. What is the cost of production for the last 10 years?*

According to Table 5 in the publication *Orchard Economics: The Cost and Returns of Establishing and Producing Hazelnuts in the Willamette Valley* created by Oregon State University (2013), which has been submitted as part of this testimony, an average cost of production in an established orchard at full production is \$692 per acre. This is based on a number of assumptions, does not include land cost and can vary widely between growers. More current numbers are being addressed by Oregon State University; however they will not be available for some time.

*10. What percentage of producers are able to cover costs of production with producer returns and how does this picture look over time (10 years)*

According to Table 5 in the HMB Annual Report and NASS statistics, the average grower price over the past 10 years is \$2,229 per ton or \$1.12 per pound. Thus over the past 10 years growers have seen an average income of \$2,890 per acre. With the cost calculated at \$692 plus an

increase for expense since 2013, it is logical to deduce that a large percentage of producers are able to cover costs of production.

In addition we have seen thousands of acres put into production during the last 7 years. Within the grower community we likely have about a third of the planted acreage in its infancy, not producing any product yet or not yet reaching full production. During the establishment period when there is no production growers are using innovative practices to create income from the acreage. Some plant trees at a double density spacing so that when they do produce, they get twice the volume. At year ten, they pull half the trees. Others are intercropping, which is planting a crop in between the tree rows, which is shown in this final slide.

### **Description of Proposed Amendments – General**

Background: Tree nuts have been implicated in a number of food safety incidents or recalls in recent years. Hazelnuts were implicated in a couple of these incidents and provided impetus for the industry to look closely at its practices. A Food Safety Steering Committee comprised of handlers and Food Science faculty from Oregon State University was formed and the Marketing Board began doing research to determine a best method to ensure hazelnuts would be subjected to a pathogen reduction process before reaching the consumer.

To date processes have been identified that provide adequate protection and the handlers in the industry have voluntarily made those processes part of their regimen. However, there is currently no authority within the Hazelnut Marketing Order to regulate the minimum quality of hazelnuts handled. Thus there is no ability to require a treatment to reduce pathogen load prior to shipping hazelnuts that are not going to be further processed by the buyer. The industry has a history of being proactive when presented with any type of issue. The food safety issue is no exception. By amending the order the industry will have laid for groundwork for a time when they wish or need to mandate certain processes to reduce pathogen load before hazelnuts reach the consumer.

#### *1. What are the proposed changes?*

The first proposed amendment would authorize the Board, with the approval of the Secretary, to establish minimum quality requirements for pathogen reduction in hazelnuts handled under the order. The second proposed amendment would make those requirements specific to the market into which the product would be shipped.

#### *2. Describe how the amended order would operate if all proposed amendments were made as recommended:*

If the amendments are accepted as proposed, basic operations of the Board will remain the same as they are currently. However the Food Safety Steering Committee in conjunction with all handlers and the Board will continue to identify efficient, cost effective systems that handlers could use for pathogen control. Members would also begin to look at how other nut groups have

set up their pathogen control systems, so they can be ready to create and implement a system for hazelnuts when necessary.

*3. What are the circumstances that have led the industry to consider and recommend the proposed changes?*

The escalated attention the nut industry has had with food safety issues has led to the consideration of the proposed changes. Historically, general research indicated foods with low water activity were not a good medium for pathogen growth. When problems with peanuts instigated further research, the entire nut industry found it was at risk. The almond industry then went through food safety situations that resulted in mandatory treatment of product. This was impetus for a meeting of the handlers to discuss what the hazelnut industry should do to be prepared. The industry then went through a couple of incidences where hazelnuts were involved in FDA food safety investigations which solidified the need for action.

*4. Why does the industry think that these changes present the best possible solution for the producers and handlers involved?*

Both growers and handlers have witnessed the negative ramifications of a food safety issue. Not only is it imperative to provide pathogen free food to the public, if there is a food safety issue, or there is even the perception of an issue, the entire industry suffers; from the growers and handlers to further processors, marketers and to the acceptance of foods by consumers. Thus the proposed changes are straightforward and will enable the industry to provide the safeguards needed to keep hazelnuts free of pathogens.

*5. Have other alternatives been explored?*

Currently the handlers are working under their Food Safety Position Paper, which was created by the Food Safety Steering Committee and has been submitted for the record. This along with education and information sent to the handlers has resulted in every handler using a proven method of pathogen reduction on product that is not going to be treated by the buyer.

To determine processes that could be used if these proposals were implemented the Food Safety Steering Committee began with work on materials that could be added to wash water to clean the nuts. While this gave some positive results and many handlers have implemented the practice, the results provide a reduction in the pathogen load, but not a consistent large reduction.

As you saw earlier, hazelnuts are harvested after they fall to the ground. It is quite impossible to keep all wildlife and birds out of the orchard, so there will always be opportunity for pathogens to adhere to the nuts. Thus when we talk about a reduction in the pathogen load we mean processes need to be in place to reduce the number of pathogens to a level that proposed close to no risk to the public.

Other options including steam treatment and PPO, which consists of putting the nuts in a chamber and filling the chamber with poly propylene oxide gas to kill pathogens have been

considered and are currently being used. However, the industry feels there is a more cost effective, efficient method yet unidentified, that they will be able to use in the future. As mentioned before the industry is growing rapidly and while current handlers are in agreement with abiding with the Position Paper, at some point in the future with more handlers involved it may be prudent to implement a system to regulate quality via the Marketing Order.

6. *Has there been outreach to involve the industry at large in the recommendation process?*

The food safety situation and industry research has been addressed at large industry meetings such as the Nut Grower's Society Summer Tours and Winter Meetings. The Food Safety Committee includes all hazelnut handlers and they have provided impetus to have this issue addressed. The handlers communicate with their growers to ensure growers that proper steps are being taken at the handler level and to encourage growers to implement good practices at the orchard level. Staff encourages any individual with questions to inquire about the process and the intentions of the HMB.

7. *Quantify perceived producer support for the proposed amendment. Handler Support.*

The handlers have been driving this proposal and currently there has been no negative response to the actions of the HMB. Growers are keenly aware of the need to reduce pathogens and have taken on the responsibility of following Hazelnut Good Agricultural Practices, a copy of which has been included in your packet, and have been working with their respective handlers to make sure they are doing everything possible in their orchards to ensure safe product for the public. They too realize the importance of ensuring product is safe.

### **Description of Proposed Amendments – Specific**

**Proposal 1. Amend Marketing Order §982.12 Merchantable hazelnuts, §982.40 (d) Marketing policy and volume regulation, §982.45 Establishment of grade, size, and quality regulations and §982.46, Inspection and certification to authorize quality regulations.**

*Purpose:* To give the board authority to regulate processes for pathogen reduction in the hazelnut industry.

*New Language and what is changing:*

**§982.12 Merchantable hazelnuts** – Addition of the word *quality*.

**§982.40 (d) Marketing policy and volume regulation** – Addition of the word *quality*

**§982.45 Establishment of Grade and Size Regulations** – Addition of the word *quality*

**Additional verbiage in §982.45: (c) Quality regulations.** *For any crop year, the Board may establish with the approval of the Secretary, such minimum quality and inspection requirements, to facilitate the reduction of pathogens, applicable to hazelnuts to be handled or to be processed into manufactured products, as will contribute to orderly marketing or be in the public interest. In such crop year, no handler shall handle or process hazelnuts into manufactured items or products unless they meet the applicable requirements as evidenced by certification acceptable to the Board. The Board may, with the approval of the Secretary, establish different outgoing quality requirements for different markets. The Board, with the approval of the Secretary, may establish rules and regulations necessary and incidental to the administration of this provision.*

**Additional verbiage in §982.46 (d):** *Whenever quality regulations are in effect pursuant to §982.45, each handler shall certify that all product to be handled or credited in satisfaction of a restricted obligation meets the regulations as prescribed.*

*Current Language:* Grade and Size regulatory authority has worked very well to regulate hazelnuts in the past. The grade and size authority allows us to set mandatory standards for grade and size attributes. Currently we use the US Grade Standards developed by USDA in 1975 for inshell and 1980 for kernels. The grade and size standards do not address quality issues, such as pathogen reduction. If the proposal to add quality authority to the order were implemented, the Board, along with industry input, would develop and recommend regulation to be approved by USDA prior to implementation.

*How the new language would work:* This would allow an efficient and effective system to be set up that would insure product free of pathogens. The proposed language, if implemented, would add authority for the Board to recommend quality regulation for approval by USDA. We call this process “informal rulemaking”. We anticipate that the development of any recommendations that the Board would make to USDA would involve the creation of an industry group, such as the Food Safety Committee, to evaluate what type of pathogen reduction program works best for the industry. This process would likely also involve the input of the USDA inspection office to ensure that any pathogen program developed would be workable. If approved through the informal rulemaking process, the regulation would become effective. The proposed language in 982.46(d) would add the authority to require mandatory certification of product if any quality regulation were in effect. The proposed language would also allow the Board to develop rules necessary for the administration of any new regulation, such as the forms or certification process. This would also be done through the informal rulemaking process and would likely go hand-in-hand with the development of any recommended quality regulation being proposed to USDA. We will be providing further specifics in later testimony.

*How the new language would be implemented/ effectuated:* As stated earlier, the identification of a system would be set in motion as deemed necessary by the HMB and the Food Safety Committee. Once the informal rulemaking process implementing any recommended quality regulation was completed, the regulation would become effective. We anticipate that, given industry participation through both the Board and the Food Safety Committee, awareness of any proposed quality regulation would be high. There would also be ample notification of the implementation of any new regulation, and its effective date would likely coincide with the



beginning of a new harvest. Obviously, there are still many details yet to be worked out, such as the certification process and the acceptance of any new testing equipment by USDA inspection that may be required, for example. But this is a general description of the steps we know must be completed before any new regulation resulting from the proposed authority could become effective.

*The expected cost or benefit:* Right now, we are working with researchers to identify the different treatment options that might be available to the industry. It is our goal to find a treatment option that would be both effective and affordable. However, we strongly believe that the benefit of creating and maintaining a system to control the processes used to reduce pathogens in the hazelnut industry would far outweigh the cost of having food safety issues within the industry.

*Industry support for the proposal:* The concept of adding “quality” to the order has been studied by all handlers for several years. Growers are informed of potential food safety issues. To give the board authority to ensure pathogen control is carried out by all handlers is accepted.

**Proposal 2. Amend §982.45 Establishment of grade and size regulations, to authorize different regulations for different markets.**

*Purpose:* To give the Board the authority to establish different systems for insuring pathogen reduction in different markets. Regulations for this proposal may be developed after regulations for Proposal 1 are put in place.

*New Language and what is changing:*

**Additional verbiage in §982.45 (d):** *Different regulation for different markets. The Board may, with the approval of the Secretary, establish different outgoing quality requirements for different markets. The Board, with the approval of the Secretary, may establish rules and regulations necessary and incidental to the administration of this provision.*

*Current Language:* This is addition of language. If the proposal to add quality authority to the order were implemented, the Board, along with industry input, would develop and recommend regulation to be approved by USDA prior to implementation.

*How the new language would work:* This would allow an efficient and effective system to be set up that would insure product free of pathogens, but would also allow for product to be sold into some markets that perform further pathogen reduction so that product would not be subjected to treatment twice, which would add to the cost of processing and likely affect the quality of the product. Examples are inshell currently being shipped to China where most product is partially cracked and then flavored by submersing the nuts in a brine solution before being sold as a snack nut. The processing done in China would make it unnecessary to have nuts processed here too.

Another example is the historical use of Turkish nuts in cans of mixed and salted nuts. Often the hazelnuts had an off flavor because nuts underwent a heat process in Turkey and were then subjected to a second roast and salting process in the U.S. Thus the quality was negatively affected.

*How the new language would be implemented/ effectuated:* Identification of a system would be set in motion as deemed necessary by the HMB and the Food Safety Committee. The intricacies of determining what controls are necessary for products that will be further processed would be addressed by the Food Safety Steering Committee which is comprised of the largest handlers and researchers.

*The expected cost or benefit:* The benefit of creating and maintaining a system to control the processes used to reduce pathogens in the hazelnut industry should far outweigh the cost of having food safety issues within the industry.

*Industry support for the proposal:* The concept of adding “quality” to the order has been studied by all handlers for several years. Growers are informed of potential food safety issues. To give the board authority to ensure pathogen control is carried out by all handlers is accepted.