



OKLAHOMA PECAN GROWERS ASSOCIATION

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Michael Smith, Editor

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President's Corner

Robert Schoenecke, OPGA President

When I wrote to you in the January article, little did I know that I would have to take my advice so seriously. It seems fairly easy to give advice or to tell someone how you would react to certain things outside your control; however, when the shoe is on your foot, it seems to fit different. On March 1, 2006, that shoe felt very different. We were the unfortunate recipient of a wild fire in which we lost all of our cleaning operation and a good portion of our farm equipment. We are now in the process of trying to get back some kind of normality, whatever that may be. I sincerely appreciate all the phone calls and expressions of concern and encouragement.

OPGA recently participated at Ag Day at the State Capitol with Bob Knight and me representing our booth. We were able to meet and visit several of the legislators and other participants. There were several school children and visitors that viewed the booth and were amazed at the process of pecan production. I am unsure of the measurability of our effectiveness but know that we were well received.

I recently received information from one of our members about a young man by the name of Garrett Hunt, a 5th grader in Duncan, that presented a Science Fair project on "Why Do Pecans Absorb Odor?" He won first in his division, top score overall and the Halliburton Award of Excellence. It is exciting to see young people take interest in pecans and accomplish such success. Congratulations Garrett!

Each of you will soon be receiving a registration packet for the annual conference which will be in Shawnee on June 18, 19 and 20th. Mark these dates on your calendar. We have a great conference scheduled and I believe that it will be very informative for you, so plan to attend.

I look forward to seeing you at the conference.



Are Wound Dressings for Pruning Cuts Necessary?

Eric T. Stafne

Horticulture & Landscape Architecture Dept.

Pruning pecan trees is one of the most important activities to maintain tree health and productivity, especially when the trees are young. However, many people cannot bear to cut off branches, even though they may be counterproductive to the overall performance of the tree. So, pruning is somewhat of a “necessary evil” to foster proper tree vigor.

Wounds from corrective pruning during the dormant season, or during the growing season due to storm damage, can be significant injuries to any tree. These wounds are potential entry points for pest infestation. The intent of a wound dressing is to seal out organisms and moisture that can lead to disease and insect problems. Yet, the theory on wound dressing has been debunked over recent years. In the past it was considered necessary to treat pruning wounds to protect against decay. However, these dressings usually crack with weathering and may trap moisture that, in turn, leads to rot and inhibits the compartmentalization process (a physical and chemical barrier that blocks out the damaged area from the rest of the tree) – exactly the opposite of what was intended! A healthy tree can isolate damage and infection through compartmentalization without the use of any wound dressings. Dressings containing asphalt, such as tar that was used frequently in the past, have been shown to actually slow the callus process. Therefore, the real benefit of using a wound dressing is questionable.

Wound dressings are also used for aesthetic purpose in urban settings. In this situation a latex paint is used, but it doesn't perform any function aside from looks and, as was mentioned above, may be harmful to the tree. Pruning should take place as late as possible in the dormant season to prevent cold injury and also has the benefit of leading into the time when the tree has the greatest potential for fast callusing (bud swell to leaf expansion). Proper timing and technique are usually all that are necessary for a pecan tree to withstand the wounds created through pruning.

Pecan Orchard Water Requirements

Michael Smith

Dept. of Horticulture & Landscape Architecture

In the last Newsletter, I published an article that included a table with the supplemental water requirements for optimum water management based on data from the Madill Mesonet site. Unfortunately, the word supplemental was omitted from the table title giving the appearance

that this was all the water that the trees needed. In fact, this was the amount of irrigation water needed to supplement rainfall to reach the optimum water supply. Below is the complete table showing rainfall plus irrigation from May through September to meet the tree's optimum water requirement. The calculated water requirements assume that the soil is near field capacity at the beginning of the growing season. Irrigation requirement is calculated using water evaporation from a class A weather pan and coefficients derived by Jodi Worthington at Texas A&M. Evapotranspiration can be calculated using the equation

$ET_{crop} = E_{pan} \times \text{Pecan } E_{pan} \text{ coefficient}$, where ET_{crop} is the supplemental water requirement in inches, E_{pan} is the water loss from a class A weather pan in inches, and pecan E_{pan} coefficients are 0.5 for May, 0.8 for June, 1 for July, 0.9 for August, and 0.5 for September.

Table 1. Rainfall plus supplemental irrigation required to meet a mature (60% canopy cover) pecan orchard's optimum water requirement at Madill during 2002 through 2004.

| Month | Rainfall (inches) | | | |
|--------------|-------------------|------|-------|------|
| | 2002 | 2003 | 2004 | Avg. |
| May | 2.47 | 6.76 | 2.06 | 3.76 |
| June | 4.20 | 2.81 | 10.28 | 5.76 |
| July | 4.05 | 0.34 | 5.17 | 3.19 |
| Aug | 3.55 | 1.92 | 2.32 | 2.60 |
| Sept | 3.27 | 7.02 | 0.98 | 3.76 |
| Season total | 17.5 | 18.9 | 20.8 | 19.1 |

| Month | Supplemental water requirement (inches) | | | |
|--------------------------|-----------------------------------------|------|------|------|
| | 2002 | 2003 | 2004 | Avg. |
| May | 3.1 | 3.2 | 3.4 | 3.2 |
| June | 6.2 | 5.5 | 4.5 | 5.4 |
| July | 7.5 | 9.8 | 7.6 | 8.3 |
| Aug | 7.3 | 7.5 | 5.8 | 6.9 |
| Sept | 3.0 | 2.6 | 2.9 | 2.8 |
| Season total | 27.1 | 28.6 | 24.2 | 26.6 |
| Total season requirement | 44.6 | 47.5 | 45.0 | 45.7 |

Noble Foundation Horticulturist

The Samuel Roberts Noble Foundation has added a new horticulturist to their staff, Dr. Charles Rohla. Charles received a Doctor of Philosophy in Crop Science with specialization in Horticulture in 2006 from Oklahoma State University. He had earned a Master of Science in Agriculture Education in 2002 and a Bachelor of Science in Animal Science in 1998 from Oklahoma State University.

Charles joined the Noble Foundation in January 2006 as a Horticulturist on the NF-3 team. His primary focus will be on pecans, but he will also address other aspects of

horticulture. His graduate research focused on the relationship of non-structural carbohydrates, organic nitrogen and potassium concentrations to alternate bearing of pecans.

Rohla was raised on a small farm in northwest Oklahoma where his family operated a wheat/stocker farm and growing lot. He is currently involved in raising purebred Limousin cattle and AQHA and APHA horses.

Notes of Interest

Michael Smith,

Horticulture and Landscape Architecture Dept.

I attended the Pecan Research and Extension Workers Workshop in Orlando, Florida that met February 4, and then attended the Southern Region American Society for Horticultural Science on February 5 and 6 at the same location. The attendance at the Pecan Research and Extension Workers Workshop has changed dramatically during the 29 years that I have been at OSU. During my first years, 40 to 60 scientists participated in the meeting. At this meeting there were 9; 3 from Georgia, 1 from Alabama, 1 from North Carolina, 1 from South Carolina, 1 from Arkansas and 2 from Oklahoma. This reflects the dramatic reduction in scientists that are assigned to work on pecans. I hope that individual producers and organizations soon realize that check-off programs must be created and these producer organizations must partner with Universities to support research and extension activities before all the pecan scientists are gone. Currently, the clear message being sent to administration by producers in most pecan producing states is that research and extension programs are not worthy of their support and have little value. Administration is responding by not refilling positions as they become vacant and reassigning existing personnel to other crops. Only two states currently have pecan check-off programs – Georgia and Texas. The Georgia Pecan Commission supports research and extension programs and promotion activities while the Texas Pecan Board primarily supports promotion activities.

Several topics were discussed at this meeting. I'll pass along some of the information that might be of interest. Tim Brenneman, Plant Pathologist at the University of Georgia, reported on several of his research projects. Tim also works on peanuts and cited some unexpected results from a study on peanuts that probably has applicability to pecans. Fungicides were most effective in protecting peanut plants from disease infection if at least 24 hours elapsed before being exposed to rain. Rain exposure within 12

hours reduced the fungicide effectiveness by about 25% and within 6 hours of application effectiveness was reduced about 50%. If rain occurred before the spray dried, fungicides were ineffective at providing protection. This same scenario may be true for pecan. This represents a major change in the way we view fungicide protection. Before, we considered the protection effective if the spray had time to dry. However, it appears there is more involved than simple drying time.

Tim also discussed managing disease resistance to fungicides. He noted that using a single fungicide for an entire season could result in development of resistance. Resistance development can be combated by either alternating fungicides that have different modes of action or using some of the premixed fungicide formulations that have two types of fungicides in the pack.

Lenny Wells, Extension Horticulturist at the University of Georgia, discussed mouse ear, a replant problem that had plagued Georgia growers and many along the Gulf Coast. Bruce Wood, USDA-ARS Horticulturist, recently discovered that mouse ear is caused by a deficiency of nickel. Nickel was not recognized as an essential element at the time of his discovery; necessitating that he presented the evidence to the AAPCO Regulators. It is now recognized as an essential element and regulated by the laws governing fertilizers. Working with several other USDA scientists and industry a new fertilizer product for nickel is available – *Nickel Plus*. Lenny also discussed a persistent problem encountered in Georgia, nitrogen scorch, an imbalance between nitrogen and phosphorus.

Bill Goff, Extension Horticulturist with the Auburn University emphasized the need for scab resistance in the southeastern U.S. Producers applied fungicides up to 12 times and still had some losses to pecan scab. Two of the cultivars Bill discussed may have merit in Oklahoma and we plan to obtain graftwood for trial. These are 'Excel' and 'Amling'. Both are early maturing, extremely scab resistant, and produce high quality kernels. Both cultivars shell out in excess of 50% kernel. None of the scientists at the meeting knew if these two cultivars were cold hardy. Adequate cold hardiness is critical for successful cultivars in Oklahoma since we average a damaging freeze 1 in 9 years. Hardy cultivars escape cold injury and susceptible cultivars can lose production for 1 to 3 years or more.

Another interesting topic that Bill brought up was some theoretical work of Patrick Connor's, Pecan Breeder at the University of Georgia, based on data from apple scab. The work suggests that the incidence of scab can dramatically be reduced by alternating cultivar rows among four

cultivars rather than planting each in solid blocks. Conner has already demonstrated that pecan scab is composed of multiple races with a high degree of specificity for host cultivars. By alternating rows, data suggests that the incidence of scab could be reduced about 40%. Since the cultivars remain in rows they could still be harvested separately and if some needed different pesticide applications mixed rows would present few problems. This planting plan merits further attention since we could passively reduce scab by 40% if this is true.

Nitrogen Fertilization

Michael Smith

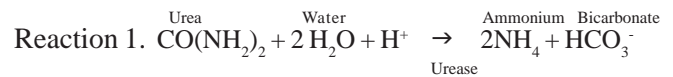
Horticulture & Landscape Architecture Dept.

Urea is now the most commonly used nitrogen source in the world (Table 1). The change to urea has been even more dramatic in Oklahoma following the act of terrorism in Oklahoma City. Efficient urea use requires more attention to application conditions than when using ammonium nitrate since nitrogen can be lost by volatilization when urea is hydrolyzed.

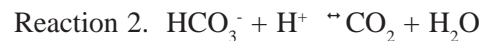
Table 1.
Share of the world N consumption by product group

| Product | Percent of total | |
|-------------------------------------|------------------|------|
| | 1970 | 1986 |
| Ammonium sulfate | 8 | 5 |
| Ammonium nitrate | 27 | 15 |
| Urea | 9 | 37 |
| Ammonium phosphates | 2 | 5 |
| Other N products (NH ₃) | 37 | 29 |
| Other complex N products | 17 | 9 |

When applied to the soil, urea reacts with water and the enzyme urease to form plant-available ammonium (NH₄⁺), a process referred to as hydrolysis (Reaction 1). Urease is present in quantities proportional to the organic matter. Urease is typically not a limiting factor in the hydrolysis of urea in conditions characteristic of Oklahoma pecan orchards. Water is required for the reaction to proceed along with hydrogen (H⁺) that is acquired from the cation (positively charged ion) exchange system of the soil.



In reaction 2, the bicarbonate (HCO₃⁻) produced in reaction 1 reacts with more soil hydrogen (H⁺) to produce carbon dioxide (CO₂) that diffuses into the atmosphere and water. The consumption of H⁺ from the soil (reaction 3) by reactions 1 and 2 raises soil pH (pH is the concentration H⁺) in the immediate vicinity of these reactions. The removal of H⁺ from the soil's cation exchange sites frees space for NH₄⁺ to adhere to the soil particles (Reaction 3). Adherence to the exchange sites prevents NH₄⁺ leaching from the soil. A portion of the NH₄⁺ remains in the soil solution developing an equilibrium between ammonium (NH₄⁺) and ammonia (NH₃) (Reaction 4). The proportion as ammonia increases as pH increases. Ammonia (NH₃) is a gas that can diffuse into the atmosphere (volatilization).



Application of urea to the soil surface results in some ammonia formation at the soil surface following urea hydrolysis. The amount of ammonia lost depends on the amount of ammonia that forms. The concentration of ammonia depends on the following factors.

- 1) The concentration of urea in the soil immediately following application. Higher urea concentrations generally result in more hydrolysis increasing pH in the immediate area resulting in higher ammonia concentrations and greater nitrogen loss.
- 2) Soil pH for 3 to 5 days after urea application. The higher the pH during this time, the higher the ammonia concentration. Reactions 1 and 2 raise pH in the immediate vicinity, so even mildly acidic soils may temporarily become alkaline at the soil surface where urea is hydrolyzed increasing ammonia formation.
- 3) The rate of urea hydrolysis in soils. Fast urea hydrolysis reduces the time for urea and ammonium to migrate deeper into the soil when surface applied. When diffusion time is reduced, the ammonium will be more concentrated at the surface, the pH will be higher, and the more ammonia will form.

Rainfall or irrigation immediately after fertilizer application can move urea into soil causing it to be less concentrated. Soil hydrogen ions consumed during urea hydrolysis are more dispersed when urea is incorporated by wa-

ter thus minimizing the pH change and ammonia formation. As little as ¼ inch of rain or irrigation is sufficient to incorporate the urea and minimize ammonia loss. A worst case scenario for ammonia loss is application of urea to a wet soil (water is needed for hydrolysis) without incorporation by rain or irrigation combined with warm temperatures resulting in urea's rapid hydrolysis at the soil surface. This raises pH in the immediate area resulting in ammonia formation and nitrogen loss.

The rate of urea hydrolysis is increased by rising temperature. For example, urea hydrolysis is increased four-fold as the temperature increases from 44°F to 80°F. Surface application of 80 lbs/a of N (173 lb/a urea) would require about 4 days for all urea to be converted to ammonia at 80°F or 12 days at 35°F. A slower reaction has less effect on soil pH resulting in less ammonia formation at the soil surface, and thus less nitrogen loss.

Tables 2 and 3 summarize nitrogen loss by volatilization under different rainfall, soil pH and temperature scenarios. Incorporation by rainfall or irrigation effectively negates nitrogen losses caused by volatilization. In high pH soils or in warm temperatures it becomes more critical that the urea be incorporated to avoid substantial losses.

Table 2. Losses of applied urea as influenced by soil pH and rain-free duration.

| Days | % of applied N volatilized | | | | |
|------|----------------------------|-----|-----|-----|-----|
| | Soil pH | | | | |
| | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 1 | 5 |
| 4 | 2 | 5 | 10 | 18 | 20 |
| 6 | 5 | 7 | 11 | 23 | 30 |
| 8 | 9 | 12 | 18 | 30 | 33 |
| 10 | 10 | 13 | 22 | 40 | 44 |

Table 3. Loss of applied urea as influenced by temperature and rain-free duration.

| Days | % of applied N volatilized | | | |
|------|----------------------------|----|----|----|
| | Temperature | | | |
| | 45 | 60 | 75 | 90 |
| 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 1 | 2 |
| 4 | 2 | 2 | 4 | 5 |
| 6 | 5 | 6 | 7 | 10 |
| 8 | 5 | 7 | 12 | 19 |
| 10 | 6 | 10 | 14 | 20 |

Silent Auction

Time to think about how we can all help fund pecan research again this year. The 2005 silent auction, with an excellent variety of donated items, was very successful bringing over \$1700. Hand crafted decorator items along with pecan weevil traps, triggered lots of friendly competitive bidding. Again, more donated items are needed. Release your creative side or perhaps sponsor necessary pieces of pecan equipment. Those who wish to help pecan research can really help by participating through donating and bidding in our 2006 Silent Auction. Contact Carole Smith at 918-958-5796 to let her know what is being donated for the Silent Auction.

Labeling Requirements for Pecans

William McGlynn

Horticultural Food Scientist

When must pecans be labeled?

With the exception of the special label (discussed below) that is required for custom pecan crackers, food labeling regulations for the state of Oklahoma refer back to federal food labeling laws. And, according to Federal labeling laws found in the Code of Federal Regulations (21 CFR Part 101), any food item that is pre-packaged for subsequent retail sale is considered a "packaged food" and therefore must comply with all pertinent labeling requirements. These regulations do exempt foods that are presented to consumers in an unpackaged form but are placed in a non-durable container following purchase. Therefore, if in-shell pecans are sold to the public by the pound from a bin and are placed into a paper or plastic bag or cardboard box after purchase, no label is required. But if those same pecans are pre-weighed into bags or boxes and placed on the shelf for sale, a complete food label is required. It's important to point out that the regulations mandate what information must be presented on the label and also how that information must be formatted and where it must be located. In other words, labeling regulations describe what, where, and how information must appear on a food label.

It is also worth noting that, according to Oklahoma state law, "Any firm, person, or corporation who represents itself as responsible for the purity and the proper labeling of any article of food by placing or having placed its name and address on the label of any food shall be deemed a manufacturer and shall be included within the meaning of these rules (Oklahoma Statutes Title 20, Section 310:260-

1-6).” This implies that any food package that is labeled with a name and address must comply with all the applicable food labeling regulations, whether or not the food would otherwise be exempt.

What items are required on a food label and how should they be displayed?

A fictional sample food label is presented on page 8 in Figure 1. For the purposes of defining a proper food label layout, a typical label is divided into presentation areas called panels. The sample food label presented in Figure 1 shows the two areas that are defined in the regulations. This sample label contains all of the information normally required on a food label.

The main area on the front of the label is defined as the Principal Display Panel (PDP). This is considered to be the area most likely to be displayed to and first seen by the consumer. Generally, the PDP is required to occupy at least 40% of the surface area of the container, though there are exceptions for odd shaped and small containers. A simple label may consist of nothing but a PDP. The other labeling area referred to in the regulations is the Information Panel (IP). This is usually the area adjoining and immediately to the right of the PDP though, again, the regulations cite exceptions for certain package types. It is important to note that the information normally presented on the IP is required to be printed complete and without intervening material such as graphics.

The area to the left of the PDP is sometimes referred to as the Educational Panel. It typically contains whatever extra label information the food manufacturer wishes to include such as cooking instructions, bar codes, and so on.

Following are the specific pieces of information that a food label is required to contain. The items are referenced in Figure 1 as appropriate.

1. A Statement of Identity – in general, this is the common or usual name of the food, if it has one. If there is no established name for the food, then a suitably descriptive name should be used. This name must include a description of the form of the food if it is sold in different optional forms such as sliced, whole, halves, and so on. Note that the statement of identity must appear on the PDP. It should be conspicuous, parallel to the bottom of the container, and presented whole and apart from any intervening material such as graphics. On the sample label in Figure 1, the statement of identity appears on the PDP as “Spicy Roasted Pecan Halves.”

2. A declaration of Container Net Weight, Volume, or Contents – this is the amount of food contained in the

package in terms of weight, volume, or count. Note that if this information is in the form of weight or volume, then it must be presented in both English and Metric units. Note too that the declaration must appear on the PDP, must be located within the bottom 30% of the PDP, and must be parallel with the base of the product. It should also be presented whole and without intervening material or qualifying words. The declaration of net weight appears on the PDP in Figure 1 below.

3. An Ingredients List – this is the list of ingredients present in the food presented in descending order of predominance by weight. Even if the food consists of only a single ingredient, e.g. pecans, an ingredient statement must appear on the label. There are a number of special provisions that may apply to an ingredients list. Among these are:

- a. Food products that contain a prepared ingredient that is itself composed of multiple ingredients, for example a seasoned salt, must list all ingredients of every component on the label. This may be accomplished either by calculating the proportions of all the ingredients in the final product and listing them in order of predominance or by using the common name of the prepared ingredient followed by its ingredients enclosed in parentheses.

- b. Spices, if they conform to the legal definition of a spice, need not be listed by name but may be grouped under the generic term spices. Spices used for flavor and color may be listed by name or identified by the generic term spice and coloring.

- c. Approved flavorings may be listed by their common name or as artificial flavor or natural flavor.

- d. Preservatives must be listed along with a description of their intended function.

- e. Certified colors must be listed by name e.g. FD&C Red No. 40. Non-certified colors may be identified by name or grouped under the term artificial coloring.

In addition to the above listed provisions, food manufacturers should be aware that there are other ingredients listing rules that apply to specific ingredients, optional or variable ingredients, trace ingredients, and so on. The ingredients list may appear on either the PDP or the IP. The ingredients list appears in the IP in Figure 1.

4. Allergen Warning – Effective January 1, 2006, the Food and Drug Administration (FDA) has required food labels to clearly state if food products contain any ingredient that contains protein derived from milk, eggs, fish, crustacean shellfish, tree nuts, peanuts, wheat, or soybeans. These must be listed clearly in the ingredients statement. Alternatively, immediately after or adjacent to the ingredi-

ents list the label may state “contains” followed by name of the source of the food allergen. Allergen warnings may appear on either the PDP or the IP along with the ingredients list. Because “Pecans” are clearly listed as an ingredient on the label in Figure 1, no further allergen warning is needed or recommended.

5. A Name and Address – this is the name and address of the food product’s manufacturer, packer or distributor. If the label names anyone other than the actual food packer, then the name must be accompanied by a phrase that describes the relation of the named company to the product, e.g., “packed for” or “distributed by.” The address must include city or town, state, and ZIP code. Country and mailing code must be included for addresses outside the United States. The street address need not be included if the firm name and address are listed in a current city directory or telephone book. A telephone number is not required. Name and address information may appear on either the PDP or the IP. The manufacturers name and address appears in the IP in Figure 1 below.

6. Nutrition Facts – this is the nutritional labeling that gives consumers specific information about the food product including calories per serving, calories from fat, total fat, cholesterol, sodium, and certain other nutrients, vitamins, and minerals. Note that as of January 1, 2006, Nutrition Facts are required to list Trans fat, even if the content is zero. Therefore, previously prepared Nutrition Facts that do not include a Trans fat listing should be redone to include this information. All food products are required to have Nutrition Facts on the label except in the following circumstances:

a. The food is sold by a retailer with annual gross total sales of not more than \$500,000, or with annual gross sales of foods or dietary supplements to consumers of not more than \$50,000. For these exemptions, a notice does not need to be filed with the Food and Drug Administration (FDA).

b. The person or company manufacturing or distributing the food is not an importer, has fewer than 10 full-time equivalent employees, and the annual sales of the food product are fewer than 10,000 total units. For these exemptions, a notice does not need to be filed with the Food and Drug Administration (FDA).

c. The person or company manufacturing or distributing the food employs fewer than an average of 100 full-time equivalent employees and fewer than 100,000 units of that product are sold in the United States in a 12-month period. For these exemptions, an exemption claim form must be filed annually with FDA.

Note that if any kind of health claim or claim concerning nutrient content, such as “low fat,” appears on the label, the Nutrition Facts must appear on the label as well, no exemption is permitted. A more complete explanation of the exemptions and a sample form for claiming an exemption is available on the U.S. FDA Center for Food Safety and Applied Nutrition (CFSAN) website at <http://vm.cfsan.fda.gov/~dms/sbel.html>. Nutrition facts may appear on either the PDP or the IP. Nutrition Facts information appears in the IP in Figure 1 below.

7. Warning Statements and Safe Handling Instructions – these are statements designed to inform consumers about potential hazards that may be associated with a given food product. The warning Phenylketonurics: Contains Phenylalanine found on foods containing aspartame is a familiar example of a warning statement. Not all foods will carry a warning statement or safe handling instructions and the regulations vary for those that do. Warnings or instructions are mandated in some cases. In other cases, warnings or instructions are merely recommended for a general class of food such as canned foods that need to be kept refrigerated after opening. Warning statements and safe handling instructions may appear on either the PDP or the IP. No warning statements are needed for the label in Figure 1.

8. Country of Origin – currently this is required if the food product was originally manufactured in a country other than the United States and has not been “substantially transformed” subsequent to it’s original manufacture. Country of origin information may be placed on the PDP. However if a domestic firm’s name and address is placed on the label, then the country of origin statement must appear in close proximity to the name and address listing. No country of origin information is listed on the label in Figure 1.

Other items that are commonly found on a food label include cooking instructions, other educational or informational material, and bar codes. None of these items are required by federal regulation. “Use by” dates are often found on food product labels or containers but are required by federal law only on infant formula products. Manufacturing facility, date of manufacture, and food product identification codes are required to be present on containers of many types of canned foods, but these codes are separate from the product label.

Specific health and nutrient content claims are permitted to appear on the labels of certain foods only; details on permitted claims and wording are available on the CFSAN website at <http://www.cfsan.fda.gov/~dms/lab-hlth.html>. Note that many packaged pecans will qualify to list the

following statement on their label: “Scientific evidence suggests but does not prove that eating 1.5 ounces per day of most nuts such as pecans as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. See nutrition information for fat content.” Specific information on claim qualifications may be found on the CFSAN website at <http://www.cfsan.fda.gov/~dms/qhcsun.html#nuts>.

It is important to note that the labeling regulations go into detail on calculating container surface areas, required minimum and relative type sizes, rounding of numbers, and many other aspects of label presentation and formatting. Many details and a general labeling guideline can be found on the CFSAN website at <http://www.cfsan.fda.gov/label.html>. Because the regulations are detailed and complex, it is advisable to have a proposed label checked for compliance by an individual experienced in the design or review of food labels. Indeed, USDA regulations require that proposed labels be submitted for approval before a

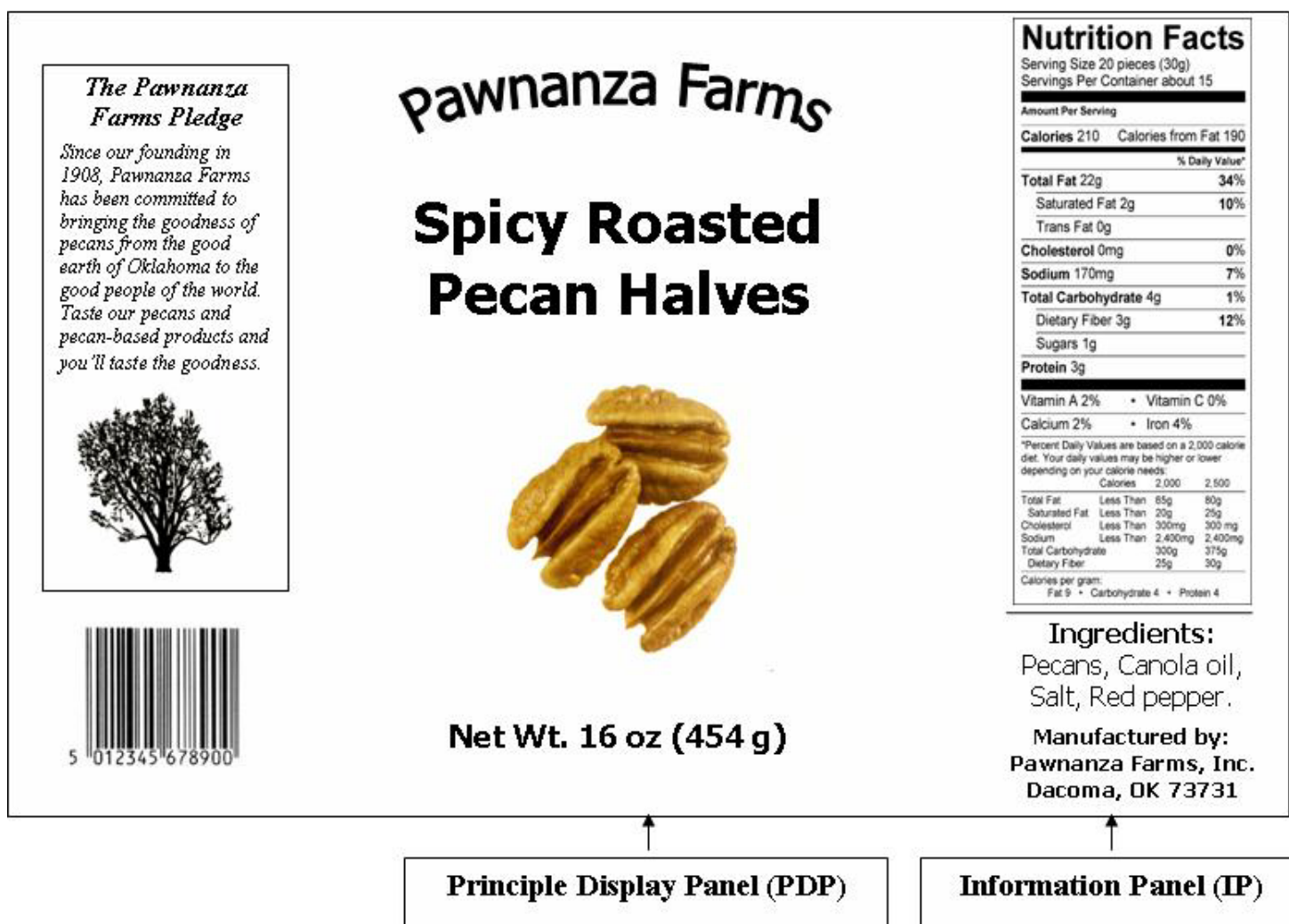
USDA-regulated product goes on sale to the public. However, the FDA has no such program and does not provide label review services. The State of Oklahoma does provide a voluntary and informal food product label review service through the Plant Industry and Consumer Services section of the OK Department of Agriculture.

Special labeling requirements for custom pecan crackers:

Oklahoma state regulations (Oklahoma Statutes Title 20, Section 310:260-5-2) provide labeling requirements for custom cracked pecans separate from any of the requirements discussed above. The relevant portion of the statute reads:

A customer’s own pecans left on the premises for custom pecan cracking must be separately labeled before and after custom cracking with the customer’s name and address. Custom pecan crackers shall affix a statement, label, bill of sale, etc., to all custom cracked pecans which states: “Custom Pecan Cracking Operations are Exempt

Figure 1 – Sample Food Label



from Health regulations on Cleaning and Sanitizing of Pecans/Processing Equipment. Pecans Cannot Be Cracked for Resale” or words to that effect.

Custom cracked pecans by definition are not being offered for sale to the public. Therefore, they are exempt from labeling requirements other than those spelled out in the above statute.

Conclusions:

The key to determining whether or not pecans or any other food products are required to comply with labeling laws is straightforward. If the product is prepackaged and presented for sale to the public in that package, then labeling is required. And if labeling is required, then the label must be complete and properly formatted. The applicable regulations describe in detail what, where, and how information must appear on a food label. Failure to comply with these regulations may result in a product recall. The expense of creating new labels and re-labeling containers could be significant. Lost product, lost time and lost sales could add to those costs. Therefore, proper and attractive label design should be a business priority and not an afterthought. This may mean taking the time to cultivate in-house expertise and familiarity with applicable regulations or it may mean outsourcing the project to an experienced label designer. However it is accomplished, creating a label that catches the eye of the buyer and not the government is a vital part of a successful food business.

April is a Busy Time for Pecan Educational Opportunities

April 24th, 7 pm – Payne County Grafting Workshop, located at the Heritage Hall in the Payne County Expo Center. For information contact Kelsey McCollum at 405-747-8320.

April 25th, 2 pm – Northeast Pecan Growers Meeting and Annual Grafting Demonstration, located at Walt Thrun’s Orchard near Claremore in Rogers County. For Growers: Large, Small & Homeowners who want to learn pecan management updates: pest & disease control, IPM methods, fertilizing, and marketing issues. Speakers include Eric Stafne- OSU State Extension Specialist, Fruit & Pecans;



Phil Mulder- OSU State Specialist -Entomology, Pecans and edible crops; Michelle Buchanan– NE area Pest Management Specialist; Josh Payne– NE area Animal Waste Management Specialist; and Bill Ihle- Pecan Broker & Marketer. For more information contact John Haase at 918-341-2736 or Sue Gray at 918-746-3717.

April 27th, 1-4pm – Cleveland County Pecan Workshop held in the Frye Auditorium at the Cleveland County Fairgrounds in Norman. Speakers tentatively include Dr. Eric Stafne, OSU Extension Specialist and Charles Rohla and Dooly Barlow from Noble Foundation. Topics covered will be: maintenance and care of pecan trees for the homeowner, harvesting, diseases and insects, and grafting. For information contact Samantha Wagner at 405-321-4774.

OPGA Meeting and Show

Plan to attend this year’s OPGA meeting in Shawnee on June 18-20. Registration information is being mailed and is available at the OPGA website: www.hortla.okstate.edu/pecan/opga/



TAKING ORDERS FOR CIRCLE PECAN WEEVIL TRAPS.

\$16.50/each. Contact Suzen Ihle at 918-367-6168.

NEW PECAN BOOK — by Wes Rice., Pecans - Volume II, A Grower's Perspective.

Color pictures and descriptions of over 80 cultivars, including Oklahoma releases. Updates on all facets of pecan culture. Over 350 color pictures. Perfect bound — \$ 32.95 + 2.50 S&H and 8% sales tax or AG exemption. Hard cover — \$46.95 + 3.00 S&H + 8% sales tax

or AG exemption. Wes Rice, 580-765-7049, 9704 Braden School Rd., Ponca City, OK 74604

911 ADDRESS

Oklahoma is in the process of replacing route and box numbers with street addresses to improve response time in case of emergency. Soon after the new address is issued the Post Office begins returning mail that bears the old address to the sender. As soon as you get a new address, please send the address revision to Janice Landgraf, RR 1 Box 148, Madill, OK 73446 or email her at okpecan@trinex.net.

ELECTRONIC NEWSLETTER

If you would like to receive your OPGA newsletter via email, please send your name and email address to: rhiannon.battles@okstate.edu with "OPGA Electronic Newsletter" in the subject line. The electronic version of the newsletter will be in Adobe PDF format.

Membership Application

We invite you to become a member of the Oklahoma Pecan Growers' Association. Membership includes the *OPGA Newsletter*, *Pecan South* and *Pecan Grower*. Make your checks payable to OPGA and mail to:

Oklahoma Pecan Growers' Association
Janice Landgraf, Treasurer
RR 1 Box 148
Madill, OK 73446
okpecan@trinex.net (580) 795-7644

Name _____

Street Address _____

City, State, Zip _____

Phone (_____) _____ email: _____

Renew New Member

Grower Member \$50.00
 Industry Member \$125.00
 Extension/Research/Student \$40.00

Oklahoma Pecan Growers' Association
c/o Horticulture & Landscape Architecture
Oklahoma State University
360 Agricultural Hall
Stillwater, OK 74078-6027

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