A COMMERCIAL USER'S GUIDE

for

GEORGIA PECANS

"For All Seasons, For All Reasons"

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I Introduction - Georgia Pecans "For All Seasons, For All Reasons"

Nuts of all types add texture, flavor and visual appeal to a wide variety of foods. Pecans, in particular, are appealing to consumers not only because they lend an image of quality but because they're the only tree nut that is truly native to the United States. This long history combined with proper knowledge of how to select and use pecans gives a powerful tool for adding value to the products they create.

Pecans have a universal versatility. They can be used year-round and in a wide variety of food preparations. Following strong loyalty in the south, retailers and food professionals say pecans are growing in importance nationwide.

Inside this handbook you will learn how to incorporate pecans into product lines. We've also included useful information on the history, the health benefits, the different varieties of pecans, as well as innovative ideas and sample recipes from top chefs from across the United States. We hope this handbook provides you with the necessary information to incorporate pecans into your formula.

The state of Georgia leads the nation in pecan production, and the Georgia Agricultural Commodity Commission for Pecans is always available to answer additional questions. For more information, contact John Williams, Communications Consultant, Sahlman ◆ Williams, at (813)251-4242; Marcia Crowley, Commodities Promotion Department of Agriculture, at (404)656-3678; or Buddy Leger, Chairman, Georgia Agriculture Commodity Commission for Pecans at (800)235 - 5289.

II History of the Georgia Pecan

"You say pea-CON: I say pea-CAN."

No matter how you say it, a Georgia pecan is a healthy taste treat and a valuable addition to any recipe. Georgia pecans are enjoyed throughout the United States and the world. Trendsetters of modern day taste and culture, such as Julia Child and Martha Stewart, as well as newcomers such as top chef Emeril Lagasse are finding innovative ways to incorporate this nut into their cooking – making it a staple of modern day diets.

Historical Roots

Pecan trees are native to the Mississippi Valley region (Illinois to the Gulf of Mexico) of the United States. Early Native Americans highly valued the nut – a staple of their diet. It's believed these first Americans pounded pecan kernels into a flour which was a main ingredient in their breads and stews. This powder also was added to boiling water and the mixture used as a seasoning for food. During the winter months, the nuts were critical to their diet because little else was available.

Native Americans first introduced pecans to Georgia's early settlers in the 1800s, using the nuts for trading. In 1846, a Louisiana gardener named Antoine was the first person to successfully graft and cultivate pecan trees. The late 1800s saw a boom in pecan production. From that time forward, Georgia quickly rose to become the top pecan producing state in the nation. The following timeline illustrates the steady growth of the state's pecan industry.

Georgia Pecan Cultivation Timeline

1871

Several large pecan groves had been planted in most of the southeastern states, including Georgia.

1889

Only 97 acres of pecans planted in Georgia, but Mississippi and Louisiana each sport 1,000 and 2,000 acres, respectively.

1880-1900

The "Golden Years" of horticulture in the South. The work of many pioneers and researchers helps establish the pecan industry.

1900-1920

Tremendous expansion of pecan acreage. The resulting production of pecans increased from approximately 27,000 pounds to 2.5 million pounds.

The early part of the 20th century also saw the establishment of the Southern Nut Growers Association (later known as the National Nut Growers Association) which contributed greatly toward advancing Georgia's pecan industry.

By the 1950s, Georgia's pecan industry was well established. As pecan production has expanded, consumers' affection for this nut's sweet crunchy flavor has never waned. According to one pecan processor, consumers prefer the taste of Georgia pecans over the competition -- walnuts and almonds.

Today, Georgia leads the nation in pecan production. The industry recorded \$72 million in annual production between 1990-1994. Currently annual production is nearly \$80 million, and Georgia pecans are always in plentiful supply. With more than 3 million pecan trees, Georgia produces, on average, 92 million pounds of pecans a year for general consumption. Modern processing also helps assure a consistent, high-quality supply of Georgia pecans for commercial users.

U.S. Pecan Cı	rop Production
	rage 1985-1996)
,	93 million lbs.
Texas	56 million lbs.
New Mexico	30 million lbs.
Oklahoma	17 million lbs.
Louisiana	15 million lbs.
Alabama	14 million lbs.
Mississippi	6 million lbs.
Source: Georgia	Pecan Commission

(Note: John Williams is working through Ray Worley to get 1996-1997 update figures)

III Trends in Usage

Georgia pecans complement and enhance almost any food type. With their rich flavor and high oil content they add texture, depth and nutritional value to recipes. Pecans already are important ingredients in bakery foods, ice cream and confections. But pecans have applications far beyond these three categories such as snacks, salads, desserts, and puddings as well as various meat, cereal, and vegetable dishes.

The flavor of a Georgia pecan is compatible with that of most foods and may be used with or without sugar, salt or spices. Their texture is such that they may be used as halves or pieces of any desired size and may either be raw or toasted. This variety of options makes Georgia pecans a useful addition to a wide range of food products.

The following pages contain suggestions for ways to add pecans to your product line, as well as innovative recipes.

BAKERY FOODS

Pecans are great in products like caramel pecan pound cake, banana pecan bread, cranberry pecan bread, pecan butter cookies, breakfast muffins, praline brownies and, of course, pecan pie. Pecans can also be added to pancakes or waffles. Less traditional treatments include adding Georgia pecans to pizza, cheese straws, biscotti and pound cakes.

Pecan meal can be used as a partial substitute for wheat flour and enhance the flavor of bakery foods.

Best form/grade: Pecan halves and pieces for batters or doughs

Whole pieces for decoration on top of bakery product

*Sample Recipes: Honey-Apple Quick Bread with Wheat Germ

Honey Bee Brownies Orange-Pecan Biscotti Pecan-Apple Muffins Pecan Cheese Coins

Pecan Wafers

^{*} Recipes are found in alphabetical order in Section VIII of this handbook.

DAIRY FOODS

Ice Cream/Frozen Yogurt

The crunch of pecan pieces adds a whole new texture dimension to ice cream. Pecans tend to hold up well in the moist dairy product environments. In addition, the grooved surface and textured skin of pecans helps them to hold coatings well in novelty applications.

Best form/grade: Pecan granules and meal

Cheese/Cheese spreads

Pecans also are great in non-sweet products like cheese and cheese spreads. This can be especially good in strong cheeses such as Saga. Another possibility is to mix pecans with pineapple and cheese in spread, log or ball form.

Best form/grade: Natural or roasted pecan pieces as a blended-in

ingredient or outer coating

*Sample Recipe: Pecan, Bleu Cheese and Roasted Apple Terrine

* Recipes are found in alphabetical order in Section VIII of this handbook.

COATINGS/BATTERS

Pecans can be added to batters and breadings for a wide variety of meats, fish, and poultry. Pecan pieces can be used for encrusting ham, pork tenderloins, chicken breasts or catfish.

Best form/grade: Small pecan pieces or pecan granules for batters

and/or coatings

*Sample Recipes: Crispy Five-Spiced Duck with Asian Spiced Pecans &

Gingered Peaches Pecan-Crusted Trout

^{*} Recipes are found in alphabetical order in Section VIII of this handbook.

CONFECTIONS

Without pecans, caramel turtles wouldn't have a leg to stand on and pralines simply would not exist. Still there's plenty of room for pecans in new candy creations whether it's as a flavor and texture builder in the piece itself or as a decorative flourish on top. Even smooth confectionery cremes can get a flavor boost from real pecans by adding pecan meal to the formula. Pecan meal can also be used as a coating for truffles.

Best form/grade: Pecan meal, whole pecans and/or pecan pieces

BREAKFAST CEREAL

Nuts have become increasingly popular in breakfast cereals. Try adding pecan meal or granules to either hot or cold cereal formulas. Cut pecans and pecan pieces also make a nice texture addition to finished cold cereals where they can be mixed in just as easily as fruit and other common cereal add-ins.

Best form/grade: Pecan pieces, pecan meal or granules

ENTREES & SIDE DISHES

Pecans also have their place at the dinner table both in side dishes and center-of-the-plate offerings.

Meat, Poultry or Fish

Pecans make a wonderful crunchy coating for salmon, shrimp, chicken and other entrees. Warm, toasted pecan halves add texture and crunch to your usual cold tuna or chicken salad.

Best form/grade: Use larger pecan cuts for prepared meat salads. Pecan pieces

for coatings

Application: Pecan Fried Shrimp with Tempura Dipping Sauce

*Sample Recipes: Pecan Crusted Chicken

Seared FoieGras with Georgia Peaches, Georgia Pecans

& Jack Daniels

Sauces/Marinades/Glazes

A ham raisin sauce with crunchy, chopped pecans is a rare treat. Pecan granules or meal also can be added to oil, garlic, ginger, vinegar, etc. to create marinades and seasonings for meats and seafood. A unique treatment – try toasted pecans in a salsa of yellow tomatoes and mango which can be used as a topping for grilled tuna, salmon, or grouper.

Best form/grade: Pecan granules, meal for marinades and seasonings,

chopped pecans for sauces.

Application: Roasted Duckling Glazed with Pecan Honey

*Sample Recipes: Pecan-Basil Vinaigrette

Sweet Potato Vinaigrette

^{*} Recipes are found in alphabetical order in Section VIII of this handbook.

Small pecan pieces can be used in vegetable side dishes, such as green beans, whipped pecan-acorn squash, or with sweet potatoes. They are a welcome substitute for almonds in many green bean dishes.

Best form/grade: Pecan pieces.

*Sample Recipes: Lemon-Pecan Green Beans

Pecan Couscous

Tabouleh with Pecans

Pasta/Pizza

Pecans can be used to perk up the texture in pasta dishes. In pesto, try using pecans in place of pine nuts for a unique pecan pesto. An interesting variation on a theme for pizza includes pesto, red grapes, pecans and mozzarella cheese.

Best form/grade: Small pieces or chopped pecans.

Application: Lemon Linguini Tossed with Pecans, Black Olives, Sundried

Tomatoes, Garlic & Olive Oil

*Sample Recipes: Asian Noodles with Shrimp, Garlic & Pecans

Pecan-Pesto Pizza

Soups

Add pecan's to soups for crunch and fiber, such as wild rice soup. Or add a new twist to good old fashioned potato soup with pecans and caramelized onion slices.

Best form/grade: Small pieces or chopped pecans, even pecan meal to add to

soup's consistency.

* Recipes can be found in alphabetical order in Section VIII of this handbook

SALADS

Pecans are complementary to most salads, as entrees or side dishes. Consider variations on classics by substituting pecans for walnuts in a Waldorf Salad, or adding pecans to a Caesar Salad. Pecans also add texture and crunch to cole slaw, chopped green salads and others.

Best form/grade: Whole pecans and/or pecan pieces.

*Sample Recipes: Black Bean, Corn, Pecan & Orzo Salad

Cider-glazed Applewood Smoked Salmon with Pecans Salad

Grilled Peppered Pear Salad & Spiced Pecans Hoppin' John Salad with Toasted Pecans Mediterranean Pecan-Chicken Salad

Pecan-Harvest Salad

Spinach Salad with Pecan-Pesto Dressing Sweet Potato, Wild Rice & Pecan Salad

Watercress & Endive Salad with Caramelized Pecans

^{*} Recipes are found in alphabetical order in Section VIII of this handbook.

SNACKS

Mixed nuts and snack mixes have had pecans for years. Why not try pecans in pre-popped popcorn snacks, crackers, snack seasoning blends? You may even want to try creating seasoning blends to be enjoyed on the nuts themselves for a pecan snack. Natural or roasted pieces also can be added to many appetizers.

Best form/grade: Smaller cuts can be used in crackers while meal and granules

can be formulated into snack seasoning blends. Whole pecan or pecan

pieces can be added to appetizers.

*Sample Recipes: Cumin-Spiced Pecans

^{*} Recipes are found in alphabetical order in Section VIII of this handbook.

IV Adding Georgia Pecans to the Formula

FORM

Adding Georgia pecans gives a product texture and flavor. It can make the product more upscale for consumers. The first step in using pecans is deciding what form of the nut to use. With eight size grades for halves and eight sizes for broken or cut pecans, including meal, product developers have a wide choice of pecan forms for the products they create.

Product size will largely determine what form and size of pecan piece to use. However, larger-sized products may be better off with smaller pieces. Whole halves are the most expensive form of the nut and are best used when the attractive dorsal surface of the nut will be visible — such as a decorative topical application. For distribution in the body of the product, less expensive pieces will allow food technologists to use a higher percentage of pecan for maximum visual and flavor impact in the product.

VARIETY

The most popular and flavorful varieties of Georgia pecans are: Stuart, Desirable, and Schley. (They will be discussed in section VI, "Varieties of Georgia Pecans," in this handbook.)

Pecans work well with sweet as well as non-sweet or savory products. Because the flavor profile does vary a bit between varieties, the desired effect in the finished product may influence what variety of pecan is selected. As another option, toasting pecans helps intensify the flavor as the heat brings out essential oils in the nut.

Once the correct form and variety are specified, the pecans must be put into the product. Fortunately, this is normally a simple procedure as pecans easily flow through fruit feeders in ice cream processing, vibratory depositors for bakery foods and other typical means of carrying dry, flowable ingredients. When using pecan halves, keep in mind that they are fragile. Plant personnel must be informed that gentle handling is required to maintain the high quality visual appeal. (Ingredient handlers also must be aware of pecan shelf life and follow the storage guidelines found in section V, "Everything You Need to Know about Selecting Georgia Pecans," of this handbook.)

ADVISORY: Allergies and Nuts

Another important area to consider is pecan allergenicity. Like all other tree nuts, the protein in pecans may cause an anaphylactic reaction in sensitive individuals, which can be triggered by seemingly insignificant amounts of protein. Avoiding such reactions requires that pecans appear on the product label.

It's also important to take this into account during product production. Appropriate measures to handle pecan residue remaining in equipment must be undertaken to avoid contaminating other non-pecan product lines created using the same machinery. Pecan residue may remain after production of a pecan-containing product. If this residue were to come into contact with a non-pecan containing product it could expose a sensitive consumer to pecan protein.

Proper sanitation when changing over lines is absolutely necessary. To avoid major cleanups between every product, cluster the production runs of nut-containing products and schedule this cluster right before a line shut-down for a thorough cleaning. Mixing order also can be a factor in avoiding cross-contact. Try to avoid adding pecans at the beginning of the process. This minimizes the direct pecan contact with mixing equipment.

V Everything You Need to Know About Selecting Pecans

"Necessity is the mother of invention."

Pecan harvesting and processing has become more advanced and mechanized over the years as production has increased. Once tediously picked by hand, the burgeoning industry and growing demand has led to the development of new machinery and harvesting equipment. What used to be a time intensive operation is now a 'well-oiled' process.

HARVESTING AND SHELLING

One of the largest fruit-bearing trees, pecan nuts become mature in mid-October and are harvested through December. One irrigated, managed acre of pecan trees will produce about 1,000 pounds of pecans. Harvesting begins when a machine grips the trunk of the tree and shakes the nuts off. Sometimes, a second shaking is necessary for certain cultivars. Next, the nuts are swept into windrows so a mechanical harvester - a machine with finger-like grips, can pick them up off the ground. A mature tree can be shaken of its pecans in minutes and an orchard can be harvested within hours.

As soon as pecans fall from the tree, they begin to dry and cure. This process initially improves the nut's appearance, aroma, flavor and texture. Rapid drying to about 8% moisture is done soon after harvesting. This helps develop the desirable nut qualities while slowing the onset of rancidity. For long-term storage, the nuts are dried to a level of 4.5%, which should be maintained throughout storage. Nut quality is quickly lost when a properly dried nut becomes wet again.

After harvest, some nuts are kept in the shell for long-term storage. Others are shelled for immediate usage. This further processing uses a variety of equipment according to the following general flow plan.

Pecan Process Flow Cleaning Size Grading In-Shell Storing Conditioning Grading Shelling Size Screening Drying Inspecting Color Grading Storage Packaging

CLEANING AND SIZING

Cleaning and sizing are necessary whether or not pecans are shelled and often is done in the orchard. Cleaning first removes debris and shriveled nuts. Nuts usually pass immediately into the sizer which separates them into nine sizes. Cleaning and sizing is accomplished with a series of screens and blowers.

CONDITIONING

Conditioning involves raising the kernel moisture to around 8%. This moisture level is high enough to make the kernel limp and pliable so it can resist shattering, yet low enough to keep the shell dry enough for cracking. Pecan processors have used many conditioning methods over the years. Today, the Food and Drug Administration requires that sufficient heat be applied during conditioning to destroy any *E. coli* bacteria that may be present on the nuts, so most processors condition pecans by keeping them moist for 24 hours then dipping them in nearboiling water for a short time. Excessive heat is avoided because it may darken the kernel's skin.

CRACKING, SHELLING, AND SIZING

Cracking, shelling and sizing occur rapidly in sequence. First, cracking machines position each nut in front of a cracking plunger. The nuts then drop to a conveyor that carries them to the sheller which removes the shells. Next, the pecan halves and pieces pass over holes of progressively larger diameters. These holes are sized to yield the numbers per pound found in the following table.

Sizes of Pecan Halves		
Size Category	Number of Halves per Pound	
Mammoth	200 to 250	
Jr. Mammo	oth 251 to 300	
Jumbo	301 to 350	
Extra Large	e 351 to 450	
Large	451 to 550	
Medium	551 to 650	
Topper	651 to 750	
Small Topp	per 750 and higher	
Se	ource: USDA	

Broken or cut nutmeats also are graded into eight sizes: mammoth, extra large, large, medium, small, midget, granules and meal. Halves and large pieces that are off-colored often are sliced into smaller pieces where the color is less obvious.

DRYING

After sizing, the kernels pass into a dryer-cooler which returns the moisture to around 3.5% to 4.5% in much the same way as the orchard dryers do. Although warm air is used for the actual drying, cool air follows immediately after in order to quickly cool the kernels and prevent quality loss.

INSPECTING AND GRADING

Generally, a quality pecan is well filled out, well-proportioned and light amber in color. In 1976, the U.S. Department of Agriculture published standards for grading in-shell pecans. These standards defined the grades, U.S. No. 1 and U.S. No. 2, and specify five size classifications, four color classifications, and allowable quantities of foreign material in a sample.

In cooperation with the United States Department of Agriculture (USDA), the Federated Pecan Growers' Association prepared another set of standards and grades for in-shell pecans which include two grades that differ in color requirements and the quantity of foreign material allowable in a lot. In-shell pecans can be polished, bleached, waxed or dyed, but in each case, the color must be uniform for the U.S. No. 1 pecan grade.

For shelled pecan halves and pieces USDA guidelines recommend inspecting for quality and size. For quality, the kernels should be:

- 1. Well Dried
- 2. Well developed
- 3. Uniform color not darker than amber
- 4. Free from damage, shell, center wall and foreign material

The USDA classifications for half and piece sizes can be found in the table, "Sizes of Pecan Halves" on page 22. Rather than use the USDA standards, many individual shellers often establish their own. These standards usually distinguish the number of pieces and halves per pound like the USDA system, but have different category names and divisions.

STORING

Pecans are perishable and will become rancid if stored improperly. This is the case both when in-shell pecans are stored by producers for later marketing, or by food processors. The most important consideration when storing pecans is for the moisture level to be low enough to prevent mold growth, yet high enough for good eating quality. This optimum level is around 4.5% and is maintained by storing the nuts at 32° to 34° F and 65% to 72% relative humidity. Use ammonia-free refrigeration. In addition, keep cases off the floor and away from brick or concrete walls to prevent shelf-life-shortening moisture absorption.

Freezing is best for storage periods of longer than a year. If stored at 0° F (-17° C) raw pecan nut meats will stay fresh for up to two years. Pecans can be frozen and refrozen for at least two years without loss of flavor or texture. They don't have to be defrosted before adding to product batches.

The shelf life of the pecan varies depending on whether the nut is in its shell and the temperature at which it is kept. Unshelled pecans can be stored in a cool, dry place for six to 12 months. Shelled nuts, refrigerated in airtight containers, will keep for about nine months. Don't store with onions or strong spices as pecans readily absorb gases and odors from the storage environment.

PACKAGING

The high oil content in pecans means they contain volatile flavors, oxidizable tannins and other biochemically active substances. In other words, they are relatively unstable. Proper packaging — such as high barrier plastics — can help protect them from air, light, moisture, insects and rodents, foreign flavors, and rough handling.

To help provide year-round availability, pecans can be shelled and frozen in plastic bags or frozen in-shell. The storage life of the nuts can be further extended by reducing the amount of air in the package or by flushing with an inert gas such as carbon dioxide. This can extend the storage life anywhere from three to 10 months at 70° F and to more than 30 months at 32° F.

Toasted pecans are much less stable than raw ones. Without vacuum packaging, they grow stale within about five days. Even with vacuum packaging, the 30-day storage life gained isn't sufficient for pre-toasted pecans to be sold as an industrial ingredient. Rather, the food processor should toast pecans before adding them to the finished product formula.

KERNEL CHARACTERISTICS

Pecan kernels have a firm texture and the characteristic sweet, nutty flavor and aroma.

Color

Color is one of the most important quality indicators in pecans. Pecans that are lighter in color are generally considered more attractive. In addition, consumers often associate dark color with rancidity. Although a dark color doesn't always indicate the pecan is rancid, the skin color does tend to darken as the nuts become more mature. Although judging color can be somewhat arbitrary, the USDA separates pecans into four color classes:

- Light. These kernels are 75% golden or lighter with not more than 25% of the nut's surface darker than golden. None of the surface can be darker than light brown.
- Light amber. This classification has more than 25% of its surface light brown, but not more than 25% of the surface can be darker than light brown. None of the surface should be darker than medium brown.
- Amber. Here, the kernels will have more than 25% of the surface medium brown, but not more than 25% of the surface can be darker than medium brown. None of the surface should be darker than brown
- Dark amber. These kernels will have more than 25% of their surface dark brown, but not more than 25% of the surface should be darker than dark brown.

In the pecan industry, it is common to label the color as either "fancy," "standard" or "amber" from lightest to darkest. Because color variations between pecan cultivars can be more subtle than the USDA guidelines, some in the industry use a one-to-10 scale for color determination with the darkest nuts ranked at one and the lightest nuts ranked as 10.

Topography

When in the shell, the packing material surrounding the kernel gives it its characteristic indentations and invaginations. Some pecans are smooth, while others are rather wrinkled. Pecan kernels also have characteristic grooves. Most recognizable are the characteristic parallel grooves on the kernel's dorsal surface. The topography of pecans isn't really an indicator of quality, but a smoother kernel will tend to separate from the packing material more easily making the nut easier to shell commercially.

Oil Percentage

Oil percentage often is used as an indirect measure of kernel development. Many also assume that each cultivar has a characteristic oil concentration. The percentage of oil, however, may vary greatly depending on the season, harvest date and nut maturity, crop load, and other stress factors. Consequently, oil percentage is not usually a commercial measure of kernel quality. Still, most cultivars will be at least 70% oil. Any less than this and the kernel is not completely developed.

Count Per Pound

This is a measure of the pecan kernel's size. The smaller the number, the larger the kernel. For consumers and food companies using pecan halves, smaller counts per pound are more desirable. On the other hand, food technologists often will use pecan pieces that make use of smaller nuts.

VI Varieties of Georgia Pecans

Over 500 varieties of pecans exist today. Over 1,000 cultivars have been released over the history of pecan culture. Four cultivars, however, are considered standard in the U.S. pecan growing industry. Three are commonly planted in Georgia orchards: **Stuart, Desirable,** and **Schley.** The fourth, Western Schley, is primarily found in western states. The reason for the widespread use of these varieties is that they've proven to be profitable over a wide range of conditions and remain so even when the trees are mature.

STUART

Often considered the most important pecan cultivar, Stuart is widely planted and contributes a dominating percentage of the world's total pecan yield. It dominates both commercial and domestic plantings in the southeastern United States.

This popularity is largely due to Stuart's resistance to winter injury and disease, the large nut size, and its moderately high nut production. In fact, the only reason that new plantings of Stuart have slowed is that Desirable trees produce nuts at a much earlier age with just as good — if not better, according to some — quality.

Stuart nuts have a count of, on average, 46 to 48 nuts per pound, but 52 is a common average. Its thicker shell easily withstands mechanical harvesting and a fragile central partition wall leads to high percentages of mammoth halves when shelled. The kernels are moderately smooth and plump with a fairly light color (6.4 out of 10) when harvested early. The color uniformity and flavor are both considered good and the nut has good storage stability.

DESIRABLE

Desirable is supposedly one of the first pecan cultivars developed from a controlled cross in the early 20th century. Desirable nuts are large and are bigger than Stuart. High-quality Desirables will have a count of 42 to 44 nuts per pound. Actual averages, however, are often closer to 47.

It has a medium thick shell leading to minimal breakage during mechanical harvesting. The nut also performs well under mechanical shelling yielding a high percentage of intact halves. The kernel is very attractive with a color rating of 6.8 (on a 10-point scale with one being the darkest and 10 the lightest.)

Desirables are much in demand because of their good flavor, relatively large kernel, good kernel color and consistent quality. Their good color is even retained during roasting making Desirable one of the best varieties for roasting and salting.

SCHLEY

Once regarded as the standard of pecan quality, this cultivar became susceptible to disease. Although effective fungicides have renewed industry interest in Schley, this is mostly for existing orchards, not new plantings.

Schley nuts are smaller than Desirable averaging about 65 nuts per pound. The shell often is thin and may split during harvesting and transport. However, this thin shell makes Schley pecans easy to shell mechanically with a high percentage of intact halves. Schley kernels have an outstanding flavor and an attractive, uniform appearance with a color of 8.4 on a one-to-10 scale.

Schley pecans may have a superior flavor, but their slender shape makes them less visually desirable — particularly to confectioners. Also, the color quality and uniformity doesn't hold up during extended storage. Unlike most other cultivars, the color quality of a Schley pecan is actually more stable if the nut is shelled.

For the most part, Schley nuts are marketed very soon after harvesting. In spite of such limitations, however, the demand for Schley's superior flavor often grants them a premium price in the marketplace.

VII Nutritional Value of Georgia Pecans

One of America's favorite nuts, pecans are an integral part of any well-balanced diet as a good source of oleic acid, Vitamin B1 - Thiamin, magnesium, protein, and fiber. Oleic acid, a fatty acid found in abundance in olive oil and other monounsaturated fats, has a protective effect on the blood. A 'good' fat, it helps lower total blood cholesterol and preserves the good HDLs that improve cardiovascular health and combat heart disease. Pecans are currently believed to be helpful in fighting some cancers. In addition, pecans contribute gamma tocopherol and a host of yet-to-be-studied phytochemicals with potential health effects.

These health benefits, combined with the health conscious eating and buying habits of consumers, make pecans a valuable addition to food product lines. By using pecans, commercial users can add delicious richness to their products and increase the health benefits.

NUTRITIONAL ANALYSIS – DRIED PECANS (CHOPPED)

Weight: 28.4 g (1 oz.- Serving Size) Water: 5%

189	Folate	11.1 mcg
2.2 g	Pantothenic	.481 mg
5.17 g	Vitamin C	.567 mg
19.2 g	Vitamin D	0 mcg
1.54 g	Vit E-Alpha E	.879 mg
11.9 g	Calcium	10.2 mg
4.76 g	Copper	.338 mg
.192 g	Iron	.603 mg
4.53 g	Magnesium	36.2 mg
0 mg	Manganese	1.28 mg
1.84 g	Phosphorus	82.4 mg
3.69 RE	Potassium	111 mg
0 RE	Selenium	3.31 mcg
3.69 RE	Sodium	.283 mg
.241 mg	Zinc	1.55 mg
.036 mg	Complex Carbs	2.1 g
.253 mg	Sugars	1.22 g
.253 mg	Alcohol	0 g
.053 mg	Caffeine	0 mg
0 mcg	Water	1.37 g
	5.17 g 19.2 g 1.54 g 11.9 g 4.76 g .192 g 4.53 g 0 mg 1.84 g 3.69 RE 0 RE 3.69 RE .241 mg .036 mg .253 mg .053 mg	2.2 g Pantothenic 5.17 g Vitamin C 19.2 g Vitamin D 1.54 g Vit E-Alpha E 11.9 g Calcium 4.76 g Copper .192 g Iron 4.53 g Magnesium 0 mg Manganese 1.84 g Phosphorus 3.69 RE Potassium 0 RE Selenium 3.69 RE Sodium .241 mg Zinc .036 mg Complex Carbs .253 mg Alcohol .053 mg Caffeine

Fat Profile

Total Fat 19.2 gram (1 oz.- Serving Size)

Saturated	1.5 g	6.8%
Monounsaturated	11.9 g	53.1%
Polyunsaturated	4.8 g	21.2%

FAT COMPOSITION

One ounce of pecans has 189 calories and 19 grams of fat. But only 2 of the 19 grams are saturated. Pecans are a good source of oleic acid. This monounsaturated fat has been found to lower total blood serum cholesterol. In 1992, a nutrition study involving 34,000 people at Loma Linda University in California found that people who ate nuts at least five times a week had about half the rate of heart disease as people who never ate nuts.

The highly publicized Mediterranean Diet/Seven Countries Study found that nuts are an important part of this healthful diet, which increases life expectancy and lowers the rate of chronic diseases. This diet is based on olive oil, fruits, vegetables, fish, chicken, nuts, grain and wine. In undertaking this study, Dr. Joan Sabaté and colleagues at Loma Linda University found that consumption of nuts was associated with a substantial reduction in the risk of heart attack and death from heart disease. They further found the protective effect of nuts to be strong and present among several population subgroups.

According to Sabaté, pecans have a unique nutrition composition among all other nuts. While most nuts are high in monounsaturated fats and walnuts are high in polyunsaturated fats, pecans have a nice blend of both of these healthy fats. The fatty acid make-up of pecans is very similar to that of olive oil — a fat increasingly popular for its healthful properties. Loma Linda researchers further found that subjects of nut-intake studies don't appear to gain weight, leading them to the conclusion that nuts have the ability to satisfy the appetite.

Ray Worley, Ph.D., a horticulturist with the University of Georgia, Tifton, has devoted the past few years to studying oleic acid in pecans. He and other researchers will hopefully someday be able to advise growers as to which varieties of Georgia pecans possess the strongest cardiovascular benefits.

Another study, undertaken by the Iowa Women's Health Study in 1993, revealed that women were 60% less likely to have heart trouble if they are nuts more than twice a week.

Nuts have been proven to be effective for diabetics, especially those placed on low-fat diets, according to research funded by the International Nut Council, Washington, D.C. Traditionally, low-fat diets have reduced the beneficial HDL cholesterol. But if saturated fat is replaced by unsaturated fat, such as that found in nuts, diabetics don't need to eat high amounts of carbohydrates and HDL levels don't drop.

OTHER NUTRIENTS

Pecans also have high levels of zinc, magnesium and selenium as well as vitamin E. Zinc is believed to be beneficial to the body's immune rejuvenation system, says Jean Carper, health and nutrition writer and author of *The Food Pharmacy and Food — Your Miracle Medicine*. According to University of North Carolina researchers, the high levels of magnesium in pecans are beneficial in fighting heart disease and selenium is found to be an antioxidant nutrient connected to a reduction in the incidence of stomach cancer. Vitamin E, currently heavily in demand by consumers, is an antioxidant vitamin that may guard against heart disease, some cancers, Parkinson's disease and cataracts.

PROTEIN AND FIBER

The fiber in pecans and other nuts is mostly insoluble which has been linked to reduced cholesterol levels and shown to be helpful in warding off colon cancer.

PHYTOCHEMICALS

Pecans and other nuts contain many phytochemicals which make them protective against cancers of the colon, stomach and rectum, according to Frank Sacks, associate professor of medicine at Harvard Medical School.

The following table lists the overall nutrient composition of pecans.

Nutritional Information for Raw Pecan Meats Per 100 Grams		
Water	4.0 gm	
Calories	711.0	
Calories from Fat	641.0	
Calories from Saturated Fat	46.0	
Protein	9.6 gm	
Total carbohydrates	13.6 gm	
Sugars	3.3 gm	
Sugar Alcohol	0.0 gm	
Dietary Fiber	5.6 gm	
Soluble Fiber		
Insoluble Fiber		
Other Carbohydrate		
Total Fat	71.4 gm	
Saturated Fat	6.6 gm	
Monounsaturated Fat	42.2 gm	
Polyunsaturated Fat		
Cholesterol	0.0 mg	
Ash	1.0 gm	
Calcium		
Phosphorus	291.0 mg	
Iron	2.1 mg	
Sodium	0.9 mg	
Potassium	392.0 mg	
Magnesium	128.0 mg	
Copper	1.2 mg	
Selenium	11.7 mg	
Zinc	5.5 mg	
Total Vitamin A	128.0 I.U.	
Vitamin A as Carotene	128.0 I.U.	
Vitamin A as Retinol	0.0 I.U.	
Thiamin	0.8 mg	
Riboflavin	0.1 mg	
Niacin	0.9 mg	
Ascorbic Acid (Vitamin C)	2.0 mg	
Vitamin B ₆	0.2 mg	
Vitamin B ₁₂	0.0 mg	
Folic Acid	39.2 mg	
Pantothenic Acid	1.7 mg	
Vitamin E	3.2 mg	
S	Source: USDA Agriculture Handbook #8	

VIII Recipes

VIII Recipes Bakery Foods

HONEY-APPLE QUICK BREAD WITH WHEAT GERM

12 oz. (2-1/2 cups) biscuit mix
2 oz. (1/2 cup) toasted wheat germ
1-1/2 cups milk
12 oz. (1cup) honey
2 eggs
2 teaspoons vanilla extract
8 oz. (2 cups) Granny Smith or other tart apples, peeled and diced finely
4 oz. (1 cup) pecans, chopped

Stir together biscuit mix and wheat germ; reserve. Beat together milk, honey, eggs and vanilla. Beat dry ingredients into honey mixture until just blended. Stir in pecans. Divide batter between two greased 4" x 9" loaf pans. Bake at 375°F until toothpick comes out almost clean, about 50 minutes. Cool in pans 15 minutes. Turn out and cool completely. Cut each loaf into 12 slices.

Recipe Source: National Honey Board.

HONEY BEE BROWNIES

5 oz. unsweetened chocolate 3 eggs 1 lb., 2 oz. (1-1/2 cups) honey 2 tbsp. vanilla extract 7 oz. (1-1/2) biscuit mix 12 oz. (2-3/4 cups) pecans, chopped Chocolate frosting- Recipe follows

Melt chocolate; cool slightly. Beat eggs; beat in chocolate, honey and vanilla. Thoroughly beat in biscuit mix. Stir in pecans. Pour into greased 12" x 20" x 2" baking pan; bake at 350°F until toothpick inserted in the center comes out clean, about 20 minutes. Cool completely . Spread with frosting; let set up. Cut into 48 $(2"\ x\ 2\text{-}1/2")$ pieces.

Chocolate Frosting: Gradually beat $\frac{1}{2}$ cup boiling water into 1-1/2 lbs. powdered sugar. Beat in 5 oz. melted unsweetened chocolate and 3 oz. (1/4 cup) honey, then $\frac{1}{2}$ tbsp. vanilla extract. Thin frosting with 1-2 tbsp. of boiling water, if necessary.

Recipe Source: National Honey Board

ORANGE PECAN BISCOTTI

The Italians dip crunchy cookies called biscotti into sweet wine or coffee. These biscotti -- so-named because they are twice-baked, first in a loaf and then in slices -- are seasoned with toasted fresh pecans and a little fresh, grated orange peel. This is a special treat that keeps for up to two weeks in an airtight container. This recipe is from the new cookbook, *Food Gifts for All Seasons* by Anne Byrn, food writer and former food editor for *The Atlanta Journal/Constitution*.

3/4 cup pecan pieces
1 1/4 cups all-purpose flour
1 1/2 teaspoons baking powder
1/4 teaspoon salt
1/4 cup (2 ounces) unsalted butter, softened
1/4 cup plus 2 tablespoons sugar
1/4 teaspoon vanilla extract
1 egg
1 teaspoon grated orange zest (freshly-grated orange peel)

Preheat oven to 350 degrees.

Place pecans in a 9-inch pie pan and toast in oven about 5-7 minutes, or until pecans are deep brown and glossy. Watch carefully so pecans don't burn. Chop finely and set aside.

Sift together flour, baking powder and salt. Set aside.

In large mixing bowl, combine butter and sugar and beat on medium speed until light and fluffy. Beat in vanilla, egg and orange zest. Fold in dry ingredients and nuts and mix until thoroughly blended.

Line a baking pan with parchment paper. Form dough into a 3- by 12-inch strip. Mound dough up slightly in center of strip so that sliced biscotti will be slightly thicker in the middle.

Bake on middle rack until light golden, about 18-20 minutes. Remove pan from oven and let cookie loaf cool 10 minutes. Reduce oven temperature to 300 degrees. Either on the pan or on a cutting board, slice loaf of dough diagonally into 1/4-inch slices. You should have between 12 and 16 slices. Turn slices so that cut-side is down. Spread out evenly on pan.

Return pan to oven and bake 20 minutes, turning cookies over halfway through baking. Turn off oven and let cookies cool 1 to 2 hours in oven with heat off. They should be quite crisp. Store in airtight container.

Recipe Source: Georgia Pecan Commission

(Nutritional Information Available Upon Request)

PECAN-APPLE MUFFINS

This fall combination of freshly-harvested pecans and apples mixed with spices makes a special breakfast, lunch or snack muffin.

2 ½ cups all purpose flour
1/3 cup sugar
1 tablespoon baking powder
½ teaspoon baking soda
1 teaspoon cinnamon
½ teaspoon nutmeg
½ teaspoon allspice
1 cup apple juice or apple cider
1/3 cup vegetable oil
½ cup maple syrup
1 egg, beaten
1 teaspoon vanilla
1 baking apple (about 8 ounces), peeled, cored and grated
1 cup currants or golden raisins
½ cup chopped pecans

Preheat oven to 400 degrees; move the rack to the center position. Use a twelve muffin tin with large, ½ cup paper liners. Combine flour, sugar, baking powder, baking soda and spices in a large bowl. Mix apple juice or cider, vegetable oil, maple syrup, egg and vanilla extract in medium bowl to blend. Mix with dry ingredients, just until combined. Fold in apple, currants or golden raisins and chopped pecans. Spoon batter into prepared muffin tin and bake until muffins are golden brown, about 28 minutes. Muffins are done when tester is inserted into center and the tester comes out clean. Cool on rack. Yields 1 dozen muffins.

Recipe Source: Georgia Pecan Commission

(Nutritional Information Available Upon Request)

PECAN - CHEESE COINS Season to your liking

1 pound of extra-sharp Cheddar cheese, shredded ½ cup unsalted butter, softened 2 cups all-purpose flour 1 teaspoon salt ½ teaspoon cayenne pepper, or more to taste ¼ teaspoon paprika ¼ teaspoon ground cumin, if desired 1 cup finely chopped Georgia pecans

Combine shredded cheese and softened butter in the bowl of a food processor fitted with steel blade or in a mixing bowl. Mix well. Add flour, salt, cayenne pepper, paprika and cumin, if desired. Process or stir until, dough comes together in a ball. With clean hands, work pecans into dough so they are well distributed.

Shape dough into three logs, about 1 ¼ inches in diameter. Wrap securely with wax paper or plastic wrap and chill at least 2 hours. (These can be frozen for up to a month. Thaw before baking).

When ready to bake, preheat oven to 350 degrees. Slice dough into $\frac{1}{4}$ -inch coins and place on baking sheets. Bake about 12-15 minutes, or until coins begin to brown. Remove to a wire rack to cool, then store in airtight tins. Yields about 8 dozen coins.

PECAN WAFERS Yield about 30 wafers

3 tablespoons clarified butter or vegetable oil 2 large baking potatoes, peeled and thinly sliced 2 cups sliced pecans, lightly toasted 2 lightly beaten egg whites 1 tablespoon coarse or kosher salt

Preheat oven to 325°F. Brush a cookie sheet or sheet pan with clarified butter or vegetable oil. Place potato slices on the cookie sheet. Place pecans in a small bowl. Add egg whites and salt, mix until combined. Spoon pecan, egg white mixture over potato slices and bake for 10 to 15 minutes or until potatoes are crisp and pecans are nicely and browned. Serve pecan wafers with drinks, as a garnish, with salad and as an accompaniment to a lamb dish.

Recipe Source: Chef David Burke, Park Avenue Café, New York, NY.

VIII Recipes Diary Foods

PECAN BLUE CHEESE AND ROASTED APPLE TERRINE

16 oz. blue cheese, room temperature 12 oz. unsalted butter, room temperature 4 oz. cream cheese, room temperature 10 oz. lightly roasted pecans, chopped 3 oz. brandy 8 golden delicious apples

Peel, core and cut apples into wedges, then butter a sheet pan and line apples in a single layer. Sprinkle generously with white granulated sugar. Bake at 350° for 10 minutes. While apples are baking, mix blue cheese, butter, cream cheese, pecans and brandy until creamy. To assemble, line a terrine mold with plastic wrap, then make a layer of apples just overlapping until the entire bottom is covered. Spread about $1\frac{1}{2}$ cups of blue cheese mixture over apples. Repeat layer of apples and cheese and finish by using all the apples and gently press with plastic wrap to ensure no air bubbles. Chill for at least 2 hours. Invert and unmold onto a cutting surface and use an electric knife. Serve with a generous sprinkling of roasted pecans and garnish with the hearts of Boston lettuce with vinaigrette.

Recipe Source: Chef-Owner Gerard Brach, Chez Nous, Humble, TX.

VIII Recipes Coatings/Batters

CRISPY FIVE-SPICED DUCK WITH ASIAN SPICED PECANS & GINGERED PEACHES

DUCK

4 each duck breast, trimmed and scored
½ cup five-spice powder
¼ cup minced garlic
¼ cup peeled, minced ginger
1 cup red wine
¼ cup olive oil
2 tablespoons chopped fresh thyme
¼ cup honey
¼ cup thin soy sauce

Combine all and marinate breasts overnight, minimum of 12 hours.

ASIAN SPICED PECANS

½ cup rice wine vinegar
½ cup water
1 cup brown sugar

¼ cup chimayo chile powder, (pasilla or ancho would work)
1/8 cup five-spice
Vegetable oil for frying

Blanch pecans in hot oil for 10 seconds. Combine all in a sauce pan and reduce to syrup consistency. Toss blanched pecans in syrup until well coated. Spread out on sheet tray and oven roast @350°F for only 6-8 minutes, just to dry them a bit. Lightly salt and cool on sheet tray.

GINGERED PEACHES
4 each peaches, peeled, large dice
1 each red onion, fine diced
¼ cup mirin (sweet sake)
¼ cup peeled, minced ginger
¼ cup mint chiffonade
Salt & pepper to taste

Caramelize onions and ginger. Deglaze with mirin and add peaches. Cook until peaches are soft. Season and add just before serving.

GARNISH

1/4 cup finely chopped red bell peppers 1/4 cup chive batons, (1/2 inch)

PLATING

Grill duck breasts sear/oven roast them medium rare. (I prefer them rare.) Place small

mound of peaches in the center of the plate. Slice duck breasts and encircle the mound. Drizzle some of the peach liquid around and garnish with pecans, red bells and chives. Enjoy.

YIELD; 4 PORTIONS

Recipe Source: Chef Ming Tsai, Santa Café, Sante Fe, New Mexico.

PECAN-CRUSTED TROUT

A crunchy coating for an American favorite gives this fresh trout special appeal. Add boiled new potatoes or rice pilaf and a green vegetable for a tasty dinner.

4 large trout fillets (about 6-8 ounces each)
Salt & pepper to taste
Fresh lemon juice to taste
1/2 cup seasoned bread crumbs, divided in half
1 cup roasted pecans (5-7 minutes at 350 degrees, until deep brown and glossy)
2 teaspoons rosemary
1/3 cup all-purpose flour
1 egg beaten with 2-3 teaspoons water
2 tablespoon vegetable oil, divided in half
2 tablespoon butter, divided in half

Season trout fillets with salt, pepper and lemon juice. Let stand at room temperature for 10 to 15 minutes. Combine 2 tablespoons of bread crumbs with pecans in blender or food processor. Grind pecans finely, combine with remaining bread crumbs and rosemary and transfer to plate. Dredge fillets in flour, shake off excess. Dip in egg wash. Place fillets skin-side up on crumb mixture, pressing into flesh. In large skillet heat 1 tablespoon each of oil and butter over medium-high heat. Place 2 fillets, skin-side up in skillet and cook until golden brown, about 3 minutes. Using spatula, turn fillets and cook until opaque in center, about 3 more minutes. Transfer to plate. Repeat with remaining butter, oil and fillets. Yields 4 main dish servings.

Recipe Source: Georgia Pecan Commission

(Nutritional Information Available Upon Request)

VIII Recipes Entrees & Side Dishes

PECAN CRUSTED CHICKEN BREASTS

Serves 6

6 chicken breast halves, skin discarded
½ cup Sesame Lemon Dressing
1 cup crushed Weston Stoned Wheat Thins, or other crisp
wheat cracker
½ cup grated Asiago cheese
¼ cup minced basil, well dried
2 tablespoons minced Italian parsley, well dried
½ teaspoon cracked pepper
½ cup pecan pieces, toasted
¼ cup butter, melted

Preheat the oven to 450°. Prepare the Sesame Lemon Dressing. Wash and pat dry the chicken breasts. Place in a shallow non-corrosive pan and pour the Sesame Lemon Dressing over the chicken breasts. Set aside in the refrigerator to marinate for 30 minutes (and up to 2 hours).

In the bowl of a food processor, combine the Stoned Wheat Thins, Asiago cheese, basil, parsley, pepper and pecans and process to crumb.

Remove the breasts from the dressing and discard the dressing. Coat both sides with pecan crumbs. Place on a buttered baking sheet, drizzle with the melted butter and roast 25 minutes until crisp and browned and cooked through.

Sesame Lemon Dressing:

3 tablespoons sesame seed oil

 ${\it 2\ table spoons\ vegetable\ oil}$

2 tablespoons shallots, peeled and minced

1 teaspoon lemon peel, grated

1 tablespoon lemon juice

1 tablespoon soy sauce

1 tablespoon hot water

Whisk together sesame oil, vegetable oil, shallots, lemon peel, lemon juice and soy sauce. Whisk in the hot water and set aside to combine the flavors.

Recipe Source: Chef Elizabeth Terry, Elizabeth on 37th, Savannah, GA.

SEARED FOIE GRAS WITH GEORGIA PEACHES, GEORGIA PECANS AND JACK DANIEL'S Serves 4

4 slabs (2 oz. each)of portioned Foie gras 1 Georgia peach cut into 20 wedges ¼ cup toasted Georgia pecans 1 shallot, finely-minced ¼ cup Jack Daniel's 1 cup duck stock 2 tablespoons. chives Salt & pepper

Season Foie gras with salt & pepper. In a very hot saute pan, sear the Foie gras quickly until each side is golden brown. Remove Foie gras from the pan, and add the peaches and pecans. Let the peaches take some color (about one minute), than add the shallots. Deglaze with the Jack Daniel's, and flame until the alcohol is cooked out, than add duck stock. Bring to a boil, then set aside. Place Foie gras on center of the plate. Fan peaches around the Foie gras and pour sauce over each Foie gras. Garnish with chives.

Recipe Source: Chef Michael Smith, The American Restaurant, Kansas City, Mo.

PECAN BASIL VINAIGRETTE

Drizzle over sliced tomatoes or salad greens

½ cup chopped fresh basil
¼ cup fresh lemon juice
¼ cup olive oil
¼ cup vegetable oil
¼ teaspoon salt, or to taste
Freshly ground black pepper
1/3 cup chopped Georgia pecans

In a mixing bowl, combine basil and lemon juice. Whisk in oils and season with salt and pepper to taste. At the last minute, fold in pecans. Serve over sliced tomatoes or salad greens. Yields 1 cup.

SWEET POTATO PECAN RELISH

5 sweet potatoes, peeled and cut in 1 inch cubes
3 tablespoons rosemary
5 cloves garlic, chopped
2 red peppers, roasted, skinned and diced
1 red onion diced
1 cup pecans, toasted and coarsely chopped
1/4 cup maple syrup
1/2 cup red wine vinegar
1 cup olive oil
Salt and pepper
2 Anaheim chilies, chopped

Toss the sweet potatoes in a little olive oil and the rosemary and garlic, roast in a $350^{\circ}F$ oven until tender, cool. Mix together sweet potatoes, red peppers, red onions, pecans and chilies. Combine maple syrup, vinegar and oil, season to taste. Mix dry ingredients with dressing.

Recipe source: Chef-Owner Nancy Oakes, Boulevard, San Francisco, CA.

LEMON PECAN GREEN BEANS Serve with grilled chicken or fish

1 pound fresh green beans
1/4 teaspoon salt, or to taste
1 tablespoon olive oil
1/4 cup sliced green onions
1/4 cup chopped, toasted Georgia pecans
2 teaspoons finely chopped fresh rosemary or dried rosemary
2 teaspoons fresh lemon juice
2 teaspoons grated lemon rind
Garnishes: lemon slice, fresh rosemary springs

Wash beans, and remove ends. Sprinkle with salt. Arrange beans in a steamer basket, and place over boiling water. Cover and steam approximately 10 minutes or until crisp-tender. Plunge green beans into cold water to stop cooking process; drain and set aside.

In a large skillet, heat olive oil over medium heat. Add green onions and cook, stirring constantly, about 3 minutes. Add green beans, pecans, rosemary, and lemon juice; cook, stirring constantly until mixture is thoroughly heated. Sprinkle with lemon rind and garnish if desired. Serve immediately. Yields 4 servings.

Pecan Couscous

Makes 6 servings

Preparation time: 40 minutes

1 1/2 cups reduced-sodium chicken stock

1 cup couscous (see note)

1/2 cup chopped toasted pecans

1/2 cup chopped parsley

6 tablespoons olive oil

1/4 cup freshly squeezed lemon juice

1 tablespoon minced fresh oregano

Salt and freshly ground black pepper to taste

2 large tomatoes, peeled, seeded and chopped (about 2 cups)

4 ounces feta cheese, crumbled

Bring chicken stock to a boil in saucepan.

Place couscous in large mixing bowl and stir boiling stock over. Stir and let rest about 15-20 minutes, or until all the stock has been absorbed. Fluff with a fork. Fold in toasted pecans and set aside.

Meanwhile, place parsley, oil, lemon juice, oregano and salt and pepper in a small mixing bowl and whisk together. Add tomatoes and crumbled feta cheese.

Pour dressing mixture over couscous, stirring to combine. Taste and adjust seasoning.

Chill 30 minutes prior to serving.

Note: Couscous is granulated, coarsely ground semolina flour. It is found in the natural foods section of supermarkets.

Per serving: 373 calories, 25 g fat, (6 g saturated), 17 mg cholesterol, 30 g carbohydrate, 330 mg sodium.

Tabbouleh with Pecans

Makes 8 servings

Preparation of bulgur: 2 hours

Salad preparation time: 20 minutes

1 cup bulgur (see notes)
1 medium sweet yellow onion, finely chopped
6 green onions, finely chopped
1 cup chopped fresh parsley
1/2 cup finely chopped fresh mint
1/4 cup olive oil
1/4 cup fresh lemon juice
Salt and freshly ground black pepper to taste
2 medium tomatoes, seeded and chopped
1 small cucumber, peeled, seeded and chopped
1/2 cup chopped toasted pecans (see notes)

Place bulgur in a medium bowl. Cover with cold water and let it stand until softened, about 2 hours. Line a strainer with a double layer of cheesecloth, and pour in the bulgur. Twist the cloth and squeeze until all the moisture has beeb extracted. This can be done a day or night ahead.

Transfer bulgur to a large bowl. Fold in onions, parsley, mint, olive oil and lemon juice. Season with salt and pepper to taste. Fold in tomatoes and cucumber. Sprinkle toasted pecans over the top.

Serve at once, or slightly chilled.

Notes: Bulgur (also spelled bulghur or bulgar) is wheat that has been steamed, dried and crushed. It is found in the natural foods section of supermarkets. Toasting pecans enhances the flavor. Place them in a pie plate or on a baking sheet in a 300-degree oven. Bake about 10 minutes for halves or 6-7 minutes for chopped pieces, stirring once or twice. They should be light golden and aromatic. Remove at once.

Per serving: 194 calories, 12 g fat (1 g saturated), 0 cholesterol, 20 g carbohydrate, 110 mg sodium.

Asian Noodles with Shrimp, Garlic and Pecans

Makes 8 servings

Preparation time: 30 minutes

8 to 9 ounces buckwheat Asian noodles (soba) or Italian-style fettucine

1/2 cup low-sodium soy sauce

1/4 cup mirin (sweet rice wine, found at Asian groceries and some supermarkets)

2 tablespoons sugar

3 tablespoons Worcestershire sauce

2 teaspoons dark sesame oil

1 teaspoon vegetable oil

1 pound large shrimp, peeled and deveined

2 tablespoons minced fresh ginger

4 cloves garlic, minced

1/2 cup chopped pecans

2 cups sliced red onion

2 1/2 cups julienne-sliced yellow squash (about 3 small)

2 1/2 cups julienne-sliced zucchini (about 2 medium)

1/4 cup minced fresh parsley or lemon basil

Bring a large pot of water to a boil. Add noodles; stir and cook for 4-5 minutes or until done. Drain, rinse with cold water and set aside in a large mixing bowl. In a small bowl, combine soy sauce, mirin, sugar and Worcestershire sauce. Set aside.

Heat sesame oil and vegetable oil in a large nonstick skillet over medium-high heat. Add shrimp and stir and cook 3-4 minutes or until bright pink and cooked through. Pour shrimp on top of noodles.

Add ginger, garlic and pecans to pan and stir and cook over medium-high heat for 15 seconds. Pour onto shrimp and noodles. Add onion to pan and stir and cook 1 minute. Add to shrimp and noodles. Add yellow squash and zucchini to pan and stir and cook until crisp and tender, about 2 minutes. Pour squash on top of shrimp and noodle mixture in bowl and stir to combine well.

Drizzle soy sauce mixture over noodle mixture. Add minced parsley or lemon basil and serve at once. Or, chill and serve as a cold noodle salad.

Per serving: 312 calories, 9 g fat (1 g saturated), 86 mg cholesterol, 41 g carbohydrate, 780 mg sodium.

PECAN-PESTO PIZZA

Delicious as an appetizer or served as an entree with salad. (Adapted from recipe for Vineyard Pizza at the Wine Exchange restaurant in Tampa, Fl.)

1 package (2) prepared 7 inch pizza bread rounds 1 (7 oz.) container prepared pesto sauce 2/3 cup shredded mozzarella cheese 1 cup halved seedless red grapes ½ cup pecan pieces

Preheat oven to 400 degrees. To assemble pizzas: top each pizza bread with 2 tbs. of pesto sauce (drain oil from pesto if needed). Next, divide cheese then grapes evenly on each pizza. Top each pizza with 1/8 cup pecan pieces. Bake directly on oven rack for 8-10 minutes. Yields 2 individual pizzas or cut into small wedges for appetizers.

VIII Recipes Salads

Black Bean, Corn, Pecan and Orzo Salad

Makes 4 servings

Preparation time: 35 minutes

8 ounces orzo (rice-shaped pasta) or macaroni

1/4 teaspoon salt

1 teaspoon olive oil

2 tablespoons freshly squeezed lime juice

3 tablespoons olive oil

1/4 teaspoon ground cumin

Freshly ground black pepper to taste

1 cup cooked black beans (canned is fine), drained

1 cup cooked corn kernels

1 small red bell pepper, cored, seeded and cut into thin slivers

1 ripe tomato, peeled, seeded and chopped (or 1 cup prepared salsa)

2 green onions, chopped

3 tablespoons chopped fresh cilantro

2 tablespoons chopped fresh parsley

1/3 cup toasted pecan halves or chopped pecans

Bring a large pot of water to a boil. Add orzo and salt, stir and cook for about 5 minutes, or until orzo or macaroni test done. Drain, toss with teaspoon olive oil and set aside.

While pasta is cooking, whisk together lime juice, olive oil, cumin and black pepper. Stir in black beans, corn, orzo, red bell pepper strips, tomato, green onions, cilantro and parsley. Stir in toasted pecans.

Taste salad and adjust seasonings. Serve at room temperature or chill 30 minutes prior to serving. Serve on lettuce leaves.

Per serving:481 calories, 19 g fat (2 g saturated), 0 cholesterol, 66 g carbohydrate, 160 mg sodium.

CIDER GLAZED APPLEWOOD SMOKED SALMON WITH PECAN SALAD

2 lbs. salmon fillet
3 cups apple cider
½ cup chopped pecans
½ cup honey
1 cup grain mustard
1 tablespoon grated horseradish
½ cup chopped dill
Pinch salt
Pinch sugar

2 medium pieces of Applewood, Cherrywood or Alderwood for grill

4 bunches of watercress
1 each diakon
1 each carrot
1 each belgian endive
34 cup olive oil
5 each lemons
Salt and cracked white pepper to taste

In sauce pan, reduce apple cider to 1 cup, add honey and cool. Once cooled, fold in mustard, chopped dill, chopped pecans, horseradish and a pinch of salt. Season both sides of salmon with a pinch of sugar and salt and let stand for 3-5 minutes. Remove stems of watercress and wash. Julienne carrot, diakon and endive. Toss with watercress and set aside. Cover cardboard with aluminum foil and place salmon on top.

Start outdoor grill 15-30 minutes prior. Soak wood chips for approximately 30 minutes in water. Once grill is ready, place salmon on foil covered cardboard. Glaze with cider reduction and place soaked applewood on coals and let them start to smolder. Place salmon on grill away from direct heat and smoke for approximately 10 -12 minutes.

Let salmon rest before serving. Salmon can be made the day before and chilled.

Toss watercress with lemon juice, olive oil, salt and pepper. Place salad in center of plate and slice salmon on top, drizzle with excess dressing.

Recipe Source: Chef James Boyce, Loews Coronado Bay Resort, Coronado, CA.

GRILLED PEPPERED PEAR SALAD & SPICED PECANS

2 Pears, peeled and cored 2 cups of water ¼ cup white wine ½ each lemon 1 teaspoon olive oil 1/4 teaspoon fresh ground black pepper 1 tablespoon vegetable oil 34 cup pears 1/8 cup sugar ½ teaspoon salt ½ teaspoon cumin 1/3 teaspoon crushed red pepper 1 cup vegetable oil 1/4 cup extra virgin olive oil 1/3 cup raspberry vinegar 1 tablespoon honey salt and pepper to taste 1/4 cup sundried cranberries 4 cups meslun greens 2 oz. gorgonzola cheese crumbled

Peppered Pears - Place pears, water, wine, and lemon in a sauce pan, bring to a boil and simmer until pears can be pierced with a knife but still offer a little resistance, approximately 15 minutes. Remove from liquid, roll in olive oil and dust with black pepper. Grill lightly over charcoal grill for 2 minutes on each side.

Spicy Pecans - In a large saute pan, toss nuts with sugar and oil. Cook over high heat, shaking pan constantly until sugar is caramelized and nuts are toasted, take caution not to burn. Immediately add spice mixture tossing to completely coat the nuts, remove from heat and let cool.

Vinaigrette - In a mixing bowl, place vegetable oil, olive oil, raspberry vinegar, honey and cranberries, whisk together. Check seasoning for salt and pepper.

Salad - Toss greens with enough vinaigrette to coat the greens. Slice the pear and divide among salads, sprinkle pecans and gorgonzola over salad.

Recipe Source: Chef Guillermo Thomas, The Capitol Grille, Nashville, TN

Hoppin' John Salad with Toasted Pecans

Makes 6 servings

Preparation time: 45 minutes

4 cups thawed frozen black-eyed peas or drained canned black-eyed peas

2 teaspoons olive oil, or pecan oil

1 sweet yellow or red onion, finely chopped

1 red bell pepper, seeded and chopped

1 green bell pepper, seeded and chopped

1 14-ounce can tomatoes, drained and chopped

3 cloves garlic, minced

1 cup long-grain white rice

2 cups defatted reduced-sodium chicken stock

1 teaspoon salt, or to taste

1/4 teaspoon cayenne pepper

3/4 cup chopped green onions

1/2 cup chopped toasted pecans

Freshly ground black pepper to taste

Drain peas well and set aside.

In a large wide saucepan, heat oil over medium heat. Add onions, peppers; stir and cook until softened, about 5 minutes. Add tomatoes and garlic and cook, stirring, for 5 minutes. Add rice and stir for 1 minute to coat the grains. Pour in chicken stock and bring to a simmer. Add salt, cayenne pepper and reserved black-eyed peas. Cover and simmer on low heat for about 20 minutes, or until liquid has been absorbed.

To serve, mound on serving plates and shower with green onions, toasted pecans and black pepper. Serve hot, warm or cold.

Per serving:330 calories, 10 g fat (1 g saturated), 2 mg cholesterol, 50 g carbohydrate, 577 mg sodium.

MEDITERRANEAN PECAN/CHICKEN SALAD

An easy, satisfying one-dish meal for anytime of the year.

3 boneless, skinless chicken breast halves (about 14 oz. total)

3 cups cooked, flavored saffron rice

5 medium tomatoes, cut into thin wedges (about 1 lb.)

½ cup chopped fresh basil

1 tablespoon olive oil

1 tablespoon fresh lemon juice

1 large garlic clove, minced (about ½ teaspoon)

2 cups mixed field salad greens

½ cup plus 1 tablespoon chopped pecans

Preheat oven to $400^{\circ}F$ or prepare barbecue (medium-high heat). Season chicken with salt and pepper. Roast or grill chicken just until cooked thorough, about 15 minutes. Cool. Cut chicken into ½-inch wide strips. In large bowl, combine tomatoes, basil, olive oil, lemon juice and garlic. Let stand at room temperature 20 minutes. Add rice and chicken to bowl and stir to blend. Toss with ½ cup pecans. Spoon salad into center of platter; surround with field greens. Garnish with remaining 1 tablespoon pecans. Serve salad at room temperature. Yields 4 servings.

PECAN-HARVEST SALAD Yields 3-4 sandwiches

4-6 oz. chicken breast, grilled and diced 1 medium red onion (diced) 2 stalks celery (diced) ½ cup chopped pecans 1 cup red seedless grapes (sliced) 1 tablespoon brown sugar 1 cup mayonnaise

Add all the dry ingredients into mixing bowl and mix. Add mayonnaise and thoroughly mix together. Serve with lettuce and tomato.

Recipe Source: The Wine Exchange, Tampa, FL.

FRESH SPINACH SALAD WITH PECAN PESTO DRESSING Serves 6

1 pound fresh spinach
1 large shredded carrot
1 thinly sliced red onion
2 chopped hard boiled eggs
2 tablespoons chopped toasted pecans
1 tablespoon chopped Basil
½ cup fresh basil leaves
½ cup extra virgin olive oil
¼ cup toasted pecans
1/3 cup balsamic vinegar
Salt & pepper to taste

Remove the stems from the spinach leaves, wash the leaves in cold water and dry them in salad spinner. Set aside. In a food processor or bar blender mix together basil leaves, balsamic vinegar, and whole toasted pecans until smooth, add slowly olive oil and season to taste. In a large bowl toss together the spinach and carrots with the dressing. Divide the spinach mixture on 6 serving plates, top the spinach salad with red onion then sprinkle with hard boiled egg, chopped pecans and chopped basil.

Recipe Source: Chef Philippe Chin, Chanterelles, Philadelphia, PA.

Sweetpotato, Wild Rice and Pecan Salad

Makes 8 servings Preparation time: 50 minutes

1 tablespoon olive oil
1/4 teaspoon salt
1 clove garlic, minced
2/3 cup chopped pecans
2 cups cubed sweetpotato (1-inch cubes)
1 1/2 cups uncooked wild rice blend
1/2 cup shredded carrots
1/2 cup finely chopped celery
1/4 cup dried cranberries or raisins
1/4 cup finely chopped red or sweet yellow onion
1/4 cup white wine vinegar
2 tablespoons olive oil
1 teaspoon low-sodium soy sauce
1 teaspoon grated orange peel
1/2 teaspoon coarsely ground black pepper

Preheat oven to 375 degrees.

Place sweet potato cubes onto a baking sheet and toss with olive oil, salt and garlic. Roast 30-35 minutes, turning once with a spatula, or until potatoes are cooked through and begin to brown. Remove from oven and set aside (this can be done a day ahead).

Place pecans in a foil pie pan and place in oven still warm from the potatoes. Turn off heat and let pecans toast in turned-off oven about 15 minutes, until they turn golden brown and smell fragrant. Remove from oven to cool.

Cook rice according to package directions, omitting salt and fat. Set aside to cool. In a large mixing bowl, combine sweet potatoes, pecans, rice, carrots, celery, cranberries and onion. Stir to mix well. Sprinkle vinegar, olive oil, soy sauce, orange peel and black pepper over salad mixture and stir so that salad absorbs dressing. Serve at once, or chill and serve later.

Per serving: 280 calories, 12 g fat (1 g saturated), 0 cholesterol, 38 g carbohydrate, 111 mg sodium.

Watercress and Endive Salad with Caramelized Pecans and Blue Cheese Dressing

Makes 6 servings

Preparation time: 3 hours for pecans, 15 minutes for salad

Carmelized pecans:

1 cup water

1 cup sugar

1 cup pecan halves

1/4 cup granulated sugar

Blue cheese dressing:

1/2 cup mayonnaise (preferably made with extra virgin olive oil) or commercial mayonnaise

1/2 teaspoon minced garlic

1 tablespoon creme fraiche or sour cream

2 teaspoons minced fresh parsley

2 teaspoons Cognac or brandy

1/2 cup crumbled blue cheese (preferably Roquefort)

Salad greens:

About 30 leaves Belgian endive

2 cups frisee (curly endive)

2 cups watercress

For the pecans, combine water and 1 cup sugar in a small saucepan over medium-high heat. Stir until mixture boils and sugar has dissolved. Remove from heat. Stir in pecans.

Preheat oven to 200 degrees.

Remove pecans from simple syrup, and while still moist dredge in remaining 1/4 cup granulated sugar. Carefully place coated pecans on baking sheet and bake 2 to 3 hours, or until pecans caramelize but don't burn. Set aside.

For the dressing, place mayonnaise in a medium bowl and stir in garlic, creme fraiche, parsley and Cognac. Fold in blue cheese and stir until well distributed. Chill.

When ready to plate salad, trim 2 inches off bottom of endive leaves, chop and place in mixing bowl along with frisee and watercress leaves. Toss with only enough of the dressing to moisten leaves.

Place remaining endive leaves, close together in a fan or circle around plate. Place a portion of the mixed greens in the center of leaves. Scatter with carmelized pecans. Drizzle some dressing lightly over fanned endive leaves.

Per serving: 470 calories, 31 g total fat (6 g saturated), 21 mg cholesterol, 47 g carbohydrate, 241 mg sodium.

Recipe Source: Chanterelles, Philadelphia, Pa./Georgia Pecan Commission

VIII Recipes Snacks

CUMIN-SPICED PECANS

1 cup pecans, toasted

¼ teaspoon kosher salt

½ teaspoon paprika

½ teaspoon toasted and ground cumin seed

½ tablespoon extra virgin olive oil

Pinch cayenne

Toast pecans in a $350^{\circ}F$ oven for 10 minutes. They should be slightly darker than raw and have a little crispiness to them. Let cool then toss in a bowl with the remaining ingredients. Add more or less cayenne to your personal taste. Serve with drinks, as a snack or use them to garnish a salad.

Recipe source: Chef Margery Reed, Café Escalera, Santa Fe, NM

IX The Georgia Agricultural Commodity Commission for Pecans

Georgia pecans taste good and are good for you, but if no one knows about their qualities how good is that? The Georgia Agricultural Commodity Commission for Pecans was formed in 1995, by means of a grower referendum. Its purpose is to fund programs in research, education and promotion on behalf of Georgia pecans.

In April 1996, the Commission launched a Georgia pecans promotion program to build awareness and educate consumers and the food/foodservice industry. As a result more than 400 million people have been reached about the great taste and healthy attributes of America's favorite nut--and consumer demand is growing.

Georgia pecans are a terrific way to add quality and variety to all types of food products. Hopefully, the information in this handbook will stimulate new ways to use pecans one of your current or in future research and development of new products. If you need more information, or have any questions, the Georgia Agricultural Commodity Commission for Pecans is here to help.

Contact Information

Buddy Leger

Chairman

Georgia Agricultural Commodity Commission for Pecans

(800)235-5289 or (912)273-4548

(Note: Mr. Leger, Secretary and Treasurer of L&M Enterprises in Cordele, Georgia is a pecan grower and broker.

John Williams

President
Sahlman • Williams

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Other Staff Contact: Stacey Snow

(Note: Mr. Williams is a marketing and communications consultant to the Commission and is responsible for the creation of this handbook.)

Marcia Crowley

Commodities Promotion Georgia Department of Agriculture

(404) 656-3678

Other Staff Contact: Susan Lewis

(Note: Ms. Crowley and the County Promotion Department represent the Commission on behalf of the State of Georgia.

GEORGIA PECANS: Not Just For Dessert Anymore!

Who can resist toasted fresh pecans sprinkled on warm chocolate brownies? Or a slice of gooey Georgia pecan pie? Yet pecans are more than an ingredient for desserts. The distinctive sweet, rich, nutty taste of pecans is a natural flavormate to fish, chicken and cheese, and the crunchy texture lends itself to all sorts of breads, salads, soups and meatless meals.

Courtesy of the Georgia Pecan Commission, here are 50 ways you're sure to love pecans without ever mentioning the word "dessert."

Breakfast With Pecans

- 1. Add pecans to your favorite banana bread or muffins.
- 2. To your favorite buttermilk scone recipe, include yellow raisins and pecans.
- 3. Make brown sugar waffles and garnish with maple syrup and toasted pecan halves.
- 4. Ditto with banana pancakes.
- 5. Add pecans to bran muffins.
- 6. Sprinkle pecans or pecan meal on oatmeal or your favorite rice, oat or wheat breakfast cereal.

Snacking/Entertaining With Pecans

7. Toss in a handful of pecans to your favorite cheese straw recipe.

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- 8. Sprinkle minced pecans and chives atop curried crabmeat.
- 9. Toast pecan halves and serve alongside soft blue cheese, such as Saga.
- 10. Combine toasted pecan halves with hot popcorn. Season to taste.
- 11. For an adult trail mix, combine pecan halves with your favorite unsweetened breakfast cereal (rice, oat or wheat), then season with salt, pepper, garlic and olive oil. Bake until lightly browned

Appetizers / Soups With Pecans

- 12. Top appetizer-size pizzas with shredded mozzarella, fresh oregano and chopped pecans before baking. Better yet, sprinkle with crumbled blue cheese and finely chopped pears before baking.
- 13. Fill miniature tart shells with sautéed apples, add a teaspoonful of blue cheese on top and sprinkle with pecans. Bake in a hot oven until cheese melts and tarts are crisp.
- 14. Match pecan's rich, earthy flavor with sherry-scented wild rice soup.
- 15. Season your favorite crabcake recipe with a handful of minced pecans, then fry miniature cakes and float atop curried corn soup.
- 16. Even grandma's potato soup deserves updating with a garnish of minced toasted pecans and caramelized onion slices.
- 17. A soup that would make Ray Charles sing "Georgia" -- a chilled pecan soup, topped with a swirl of lime-scented sour cream and toasted, sugared pecans.
- 18. Before spooning a rich cheddary Welsh rarebit (rabbit) atop toast, add a handful of toasted pecans.
- 19. Stuff Greek-style grape leaves with a mixture of brown rice that you season with minced pecans, cumin, cinnamon and currants.

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Salads With Pecans

- 20. Crown a grilled Portobello mushroom salad with toasted pecans, then sprinkle balsamic vinegar and olive oil over the mushroom, greens and pecans.
- 21. Update the classic spinach salad with applewood-smoked bacon, freshly grated parmesan and, you guessed it, chopped toasted pecans.
- 22. Open sesame. Mouths will open wide when they are tantalized with a simple Asian pasta salad you dress with sesame oil and rice vinegar and season with chili peppers, green onions and ground pecans.
- 23. Not your average Waldorf. Combine toasted pecans with apple chunks, celery, grapes and a light mayonnaise-based dressing.
- 24. Slice 1/2-inch thick French bread rounds, spread with soft goat cheese, add a sprinkle of minced rosemary or thyme and some finely minced pecans. Run under the broiler until bubbly, cut into crouton-size pieces and serve with your favorite green salad.
- 25. Enliven ordinary chicken salad with halved red grapes, mandarin oranges and toasted pecans.
- 26. Pecans add crunch to a warm beet salad with fresh orange segments.

Entrees With Pecans

- 27. Season a Midwestern-style ham loaf with brown sugar, sweet onion, tomatoes and a pinch of cloves, then fold in chopped pecans.
- 28. Encrust a pork tenderloin in chopped pecans and bread crumbs before roasting. Serve with sweet potatoes and mushroom-garlic custard.
- 29. Grind pecans into a paste with fresh ginger, olive oil, garlic and a splash of vinegar. Smear atop tuna steaks and grill until medium-rare.

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- 30. Combine ground pecans with parsley and green onions, thicken with olive oil and spread on salmon fillets before grilling. Serve with steamed new potatoes.
- 31. Toasted pecans add richness to a salsa of yellow tomatoes and mango you serve atop grilled or baked grouper.
- 32. In the style of the Low Country, season shrimp with red pepper, paprika and salt, then pan-fry in butter or olive oil. Spoon atop steamed rice and toasted pecans.
- 33. Slice smoked chicken and fold into a wild mushroom cream sauce. Serve atop fettucine with peppered toasted pecans.
- 34. Chicken tettrazini is a classic. Don't forget the minced pecans and chopped green olives.
- 35. Before baking chicken breast tenders, brush them with olive oil, then dredge in a mixture of bread crumbs, pecans and parmesan.
- 36. Toss whole wheat linguine with French lentils, carrots and pecans.
- 37. Crown baked polenta with tomatoes, chopped pecans and fontina cheese.
- 38. For a meatless loaf, combine brown rice, onion, mushrooms, seasonings, eggs and ground pecans.
- 39. Fresh summertime pesto calls out for basil and ground pecans.

 Simply toss with pasta, sprinkle Parmesan cheese, and serve hot or cold.

Side Dishes With Pecans

- 40. Slaw never tasted so good. Mix shredded cabbage, carrots and sweet onion along with a sesame vinaigrette and minced toasted pecans.
- 41. Alternate layers of French bread slices and toasted pecans in a casserole dish. Pour over beaten eggs, milk, grated nutmeg and Swiss cheese and bake until the strata is bubbly.

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- 42. Compatible flavors come together in a wild rice casserole garnished with pecans.
- 43. Quickly stir-fry parboiled sweet potato cubes and shredded mustard greens, then shower with pecans.
- 44. This winter, bake a butternut squash gratin you top with pecans.
- 45. Don't forget sweet potato soufflé. Top with marshmallows and pecans.
- 46. Walk on the wild side. Cook lima beans with a pinch of curry powder and sprinkle with minced toasted pecans.
- 47. Bake your favorite corn bread, to which you add a handful of pecans.
- 48. Combine pecans and cranberries in a sweet, quick bread.
- 49. Make cheese bread and season with pecans and black pepper.
- 50. Add a Southern touch to focaccia using chopped pecans and soft peppered goat cheese.

THE NUTTY FACTS ABOUT GEORGIA PECANS

A Delicious Nutritious Nut:

- One of America's favorite nuts, pecans should be incorporated in any well-balanced diet as a good source of oleic acid, Vitamin B-Thiamin, magnesium, protein and fiber.
- Nuts are a part of most universally-accepted balanced diets, such as the "Mediterranean Diet," which includes fish, poultry, vegetables, fresh and dried fruit, nuts, grains, olives and olive oil.
- Nuts appear in the meat/protein section of the food pyramid guidelines, established by the U.S. Food and Drug Administration (FDA).
- Pecans have such a distinctive and popular flavor "au natural." That flavor is enhanced in the baking process or by toasting before adding the nuts to a recipe.
- Like most nuts, pecans contain fat, therefore, we recommend they be used in small amounts. Fortunately, most of the fat is unsaturated, "the good type," which may help lower LDL cholesterol levels in your blood.
- America's President, food connoisseur and gardener, Thomas Jefferson, was very taken by the flavor of pecans and had trees imported from Louisiana for his Monticello orchards.

History:

- The pecan is native to the Mississippi Valley region of the U.S. and probably was introduced to Georgia by Indians.
- By 1871, several large pecan groves had been planted in most of the southeastern states, including Georgia.

GEORGIA PECANS / NUTTY FACTS – Page 2 of 3

- Georgia's commercial pecan production began during the late 1800s.
- The pecan tree is a member of the hickory family.
- In September 1995, the pecan growers of Georgia voted to establish the Georgia Agricultural Commodity Commission for Pecans (Georgia Pecan Commission) to provide leadership and funding for programs in three areas: research, education and promotion.
- In 1995, Georgia pecan wood was selected by the Atlanta Committee for the 1996 Olympic Games (ACOG) for making the handles of the Olympic torches. Georgia farmers donated 60 Georgia pecan trees -- enough to make more than 10,000 torch handles. The torches were carried in the 15,000-mile U.S.A. relay and in the lighting of the Olympic flame at the Olympic stadium in Atlanta on July 19, 1996.

Production:

- Georgia is the world's top producer of pecans with 75 million lbs. in 1995. Other top producers in 1995: Texas, 60 million lbs.; New Mexico, 39 million lbs. and; Oklahoma, 20 million lbs.
- The all-time production record was set by Georgia in 1978, when it produced 135 million lbs.
- One irrigated, managed acre of pecan trees will produce about 1,000 pounds of pecans.

Buyer's Guide:

- The best time to buy pecans is during the fall harvest season.
- Look for plump pecans that are uniform in color and size.
- The shell of a pecan should be smooth and light brown in color.
- Expect to pay more per pound for shelled pecans than those still in the shell. About 90 percent of all pecans are sold shelled.

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Storage:

- Pecans can be kept in the refrigerator for about nine months or stored in the freezer for up to two years, shelled or unshelled.
- Pecans are perishable and will become rancid if stored improperly. When pecans appear shriveled or emit a strong smell, discard them.
- Airtight containers, such as jars with lids (for refrigerator) or plastic bags with a sealer (for the freezer), are best for storing pecans.

Pecan Varieties and Other Uses:

- Over 500 varieties of pecans exist today. Some of the most popular include Desirable, Stuart and Schley.
- Pecan trees are prized for their lumber because they make beautiful furniture, flooring and paneling.

THE NUTRITIONAL BENEFITS OF EATING PECANS

ATLANTA - A handful of warm, toasted pecans is not only delicious and satisfying, but researchers are finding it may be as beneficial to your health as cooking with olive oil.

Pecans are an excellent source of oleic acid, a fatty acid found in abundance in olive oil and other monounsaturated fats. These monounsaturated fats have a protective effect on the blood, lowering total blood cholesterol and preserving the good HDLs that help combat heart disease.

Dr. Ray Worley, horticulturist with the University of Georgia in Tifton, has devoted the past few years to studying oleic acid in pecans. He and other researchers will hopefully someday be able to advise growers as to what varieties of Georgia pecans are most heart-smart. Right now he knows that the plumper, fuller pecans have higher oleic acid contents.

And in addition to improving cardiovascular health, pecans and other tree nuts are believed to be helpful in fighting some cancers. In spite of being a high-fat food, Loma Linda University researchers have found that nuts are unique, special foods eaten widely in the Mediterranean where people have for centuries enjoyed longevity and the lowest rates of heart disease in the world. Pecans also contain an abundance of vitamins, minerals, antioxidants and fiber.

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Pecans have that unmistakable sweet-rich crunch, which is heightened when they are lightly toasted. They're at home in appetizers, soups, salads, main dishes, breads and desserts. Originating in the southern United States, pecan trees are from the hickory family, and Georgia continues to reign as the largest U.S. pecan-producing state.

Buddy Leger, chairman of the Georgia Pecan Commission, says the state's pecan growers are committed to funding research to unlock more nutritional secrets of pecans.

"We have a commitment to health," says Leger. "My wife and I use pecans year 'round and on a weekly basis in a variety of foods, including salads as well as main and side dishes."

"Pecans and other tree nuts were consumed long before health researchers began uncovering their benefits, and that's all the more reason to savor them," says Jean Carper, health and nutrition writer and author of *The Food Pharmacy and Food - Your Miracle Medicine*. "Nuts are one of the original foods of prehistoric man. Therefore, the body is attuned to nuts. It needs nuts."

Comparing fat and calories with other nuts, pecans fall right in the middle. With 189 calories per ounce (a generous handful), that's less than macadamias with 199 calories but slightly more than walnuts with 182. Total fat grams, too, are lower than macadamias with 19.2 compared to 20.9, and slightly higher than walnuts with 17.6 fat grams. However, only 1.5 grams of the pecan's fat is saturated, compared to macadamias with 3.1 grams saturated fat and walnuts with 1.6 grams saturated fat. Most of the fat in nuts is monounsaturated and polyunsaturated.

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It is this "good" fat that makes pecans and other nuts beneficial in the fight against heart disease. At Loma Linda four years ago nutrition researchers unveiled findings of a survey that had been conducted with some 34,000 Seventh Day Adventists a decade earlier. The participants were surveyed as to how often they ate some 65 different foods. Six years after the survey, the people who had consumed nuts at least five times a week had about half the rate of heart disease as people who never ate them. Even eating nuts once a week reduced the risk by a quarter.

There has been further evidence to suggest you should help yourself to a handful of pecans or other nuts:

- The Seven Countries Study (also known as the Mediterranean Diet) is a long-term study of eating habits of the Mediterranean people. Initiated in the 1960s, it linked diet with high life expectancies and low chronic disease rates. This diet is based on olive oil, fruits, vegetables, fish, chicken, nuts, grain and wine. Nuts are an important part of the diet, as is monounsaturated fat, such as that found in pecans and other nuts. A conference on nuts, health and the Mediterranean Diet was conducted in 1994 and organized by the Oldways Preservation & Exchange Trust and the International Nut Council (INC), based in Washington, D.C.
- Three years ago the Iowa Women's Health Study revealed that women were 60 percent less likely to have heart trouble if they ate nuts more than twice a week.
- Pecans and other nuts contain many phytochemicals, which make them protective against cancers of the colon, stomach and rectum, according to Frank Sacks, associate professor of medicine at Harvard Medical School.

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- Nuts have been proven to be effective for diabetics, especially those placed on low-fat diets. Traditionally, diets low in fat have reduced the beneficial HDL cholesterol. But if saturated fat is replaced by unsaturated fat, such as that found in nuts, diabetics don't need to eat high amounts of carbohydrates and HDL levels don't drop, according to research funded by the INC.
- The Loma Linda researchers found that subjects of nut-intake studies don't appear to gain weight, which leads them to believe that nuts have the ability to satisfy the appetite.
- The fiber in pecans and other nuts is mostly insoluble, says Carper, which has been linked to reduced cholesterol levels and shown to be helpful in warding off colon cancer.
- Pecans contain high levels of zinc, believed to be beneficial to the body's immune rejuvenation system, says Carper; also high levels of magnesium, beneficial in fighting heart disease; and selenium, found to be an antioxidant nutrient connected to a reduction in the incidence of stomach cancer, according to University of North Carolina researchers. It also contains vitamin E, an antioxidant vitamin that may guard against heart disease, some cancers, Parkinson's disease and cataracts.

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And you thought pecans just tasted good -- so good that pecans are one of the most frequently requested snacks. A 1993 survey of more than 400 consumers nationwide by the University of Georgia College of Agricultural and Applied Economics at Griffin revealed that people choose to serve pecans because they taste great, are elegant, are convenient and because their guests like them.

"Little needs to be done in order for pecans to be served to your guests," says Wojciech Florkowski, the associate professor who conducted the university survey. "Toast them, sprinkle with a little salt if you like, but that's about it."

GEORGIA PECANS / Nutritional Benefits – Page 6 of 6

EDITOR'S NOTE -- INFORMATION SOURCES

References:

- 1. Dr. Ray Worley, horticulture research scientist, University of Georgia Coastal Plain Experiment Station (Tifton, Ga.).
- 2. Dr. Gary Fraser, professor of epidemiology, professor of medicine, director of The Center for Health Research, Loma Linda University (Loma Linda, Calif.).
- 3. Jean Carper, health and nutrition writer, author *Food Your Miracle Medicine* (Washington, D.C.).
- 4. U.S. Department of Agriculture statistics.
- 5. International Nut Council, c/o Patricia Kearney, PMK Associates (Washington, D.C.) Oldways Preservation & Exchange Trust (Boston). Sponsors of the 1995 symposium on *Tree Nuts, Health and the Mediterranean Diet*.
- 6. Dr. Frank Sacks, associate professor of medicine, Harvard Medical School, and associate professor of nutrition, Harvard School of Public Health (Boston).
- 7. Wojciech Florkowski, associate professor at the University of Georgia Department of Agricultural and Applied Economics (Griffin, Ga.).

AMERICA'S CHEFS 'GO NUTS' WITH PECANS

For All Seasons, For All Reasons!

(Editor's Note: * indicates recipe available upon request)

Pecan Wafers*

Park Avenue Cafe New York, N.Y.

Sweetpotato Biscuits Baked with Pecans

City Tavern Philadelphia, Pa.

Seared Chile and Corn Crusted Tuna with Avocado Salad and Pecan Scallion Pesto

Striped Bass Philadelphia, Pa.

Watercress and Endive Salad with Caramelized Pecans and Blue Cheese Dressing * (color slide available)

Chanterelles Philadelphia, Pa.

Organic Field Lettuces in Citrus-Shallot Vinaigrette with Spicy

Pecans

Magnolia Grill Durham, N.C.

Pecan Crusted Chicken*

Elizabeth on 37th Savannah, Ga.

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Chicken with Leek, Pear, & Mushroom Sauce*

(with Chopped Pecans) Elizabeth on 37th Sayannah, Ga.

Southeastern Spring Mix with Mustard Basil Vinaigrette, Kahlua Toasted Pecans and Maytag Blue Cheese

The Beech Street Grill Fernandina Beach, Fla.

Grilled Large Scallops with Pecan Butter Paste and Orange, Fennel and Red Onion Salad

The Beech Street Grill Fernandina Beach, Fla.

Hand Harvested Sea Scallops w/ Goat Cheese, Cream-Flavored Huitlacoche and Wild Corn Mushroom, Served w/ Pecan and Crusted White Corn Polenta

Chive

Dux Orlando, Fla.

Roquefort and Autumn Berries Tossed w/ Organic Young Lettuce, Carmelized Onions, Port Wine and Candied Pecans

Dux

Orlando, Fla.

Southern Comfort Pecan Pork Loin Glazed with an Apricot Sage

Sauce

Bernini

Tampa, Fla.

Pecan Fried Shrimp with Tempura Dipping Sauce

The Colonnade

Tampa, Fla.

Mixed Green Salade With Candied Cayenne Pecans and Grapefruit Pink Peppercorn Vinaigrette

Mise en Place

Tampa, Fla.

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Grainy Mustard Pecan Crusted Rack of Lamb with Bourbon Shallot Demi Glace, Cayenne Onion Rings and Tarragon White Cheddar Grits

Mise en Place

Tampa, Fla.

Roasted Duck with Roasted Pecan Couscous

Pebbles

Tampa, Fla.

Grilled Yellowfin Tuna with Roasted Pecan Couscous

Pebbles

Tampa, Fla.

Vineyard Pizza* (color slide available)

(Pesto, Pecans, Grapes and Mozzarella Cheese)

The Wine Exchange

Tampa, Fla.

Lemon Ling*

The Wine Exchange

Tampa, Fla.

Pecan-Harvest Salad*

The Wine Exchange

Tampa, Fla.

Lemon Linguini Tossed With Pecans, Black Olives, Sundried Tomatoes, Garlic and Olive Oil*

The Wine Exchange

Tampa, Fla.

Chicken Salad with Pecans Sandwich*

The Wine Exchange

Tampa, Fla.

Sauteed Scallops with Pecans and Lime*

The Ritz-Carlton

Naples, Fla.

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Pecan-Crusted Catfish

Fire Fish Grill

Indian Rocks Beach, Fla.

Stuffed Smoked Pork Chops Filled with Apples with Cornbread and Pecans

Fire Fish Grill

Indian Rocks Beach, Fla.

Bistro Salade with Brandied Pecans, Sundried Cranberries, Goat Cheese, and Rosemary Beef Vinaigrette

Bistro Zenith

Palm Beach Gardens, Fla.

Grilled Peppered Pear Salad with Mesclun Greens, Sundried Cranberry Vinaigrette, Gorgonzola and Spiced Pecans*

The Capitol Grille, The Hermitage Hotel Nashville, Tenn.

Bourbon Ball French Toast*

(Topped w/ Pecan Custard) Lynn's Paradise Café Louisville, Ky.

Praline Sweetpotatoes*

Brigtsen's

New Orleans, La.

Sea Trout with Roasted Pecans*

Commander's Palace

New Orleans, La.

Trois Pecans

Palace Café

New Orleans, La.

Catfish Pecan

Palace Café

New Orleans, La.

GEORGIA PECANS / Chefs 'Go Nuts' - Page 5 of 7

Hot, Smoked Pecan Red Snapper on Artichoke-Spinach Casserole with Shrimp Hushpuppies and Tomato Chutney

The Mansion at Turtle Creek Dallas, Texas

Pecan, Bleu Cheese and Roasted Apple Terrine*

Chez Nous Humble, Texas

Seared FoieGras with Georgia Peaches, Georgia Pecans and Jack Daniel's*

The American Restaurant Kansas City, Mo.

Winter Green Salad with Braised Endive, Spicy Pecans and Coriander Mustard Vinaigrette

Okno Chicago, Ill.

Chicken Vivian-Leigh

(Pecan-Crusted Chicken with Sage & Cherry Sauce, Broiled) The Pump Room Chicago, Ill.

Pecan Crusted Venison with Smoked Ahi Tuna and Sweet Pepper Mornay Sauce

Napa Valley Grille Minneapolis, Minn. (The Mall of America, Bloomington)

Romaine Lettuce and Maytag Bleu Cheese, Spiced Pecans, and Red Onion and Bleu Cheese Dressing

Napa Valley Grille Minneapolis, Minn. (The Mall of America, Bloomington)

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Caliente Y Frio*

(Quesadilla around bowl of Mixed Greens, Toasted Pecans, and Roma Tomatoes) Sam's Café Phoenix, Ariz.

Raspberry Salad with Pecans*

The Pointe Hilton at Squaw Peak Phoenix, Ariz.

Pan Roasted Swordfish with Pecan Meal and Roasted Pepper Salsa*

Loews Ventana Canyon Resort Tucson, Ariz.

Mixed Green, Pear and Blue Cheese Salas with Port Wine Vinaigrette and Spiced Pecans

Loews Ventana Canyon Resort Tucson, Ariz.

Risotto Salad with Baby Greens, Aged Balsamic Dressing & Carmelized Pecans

Café Terra Cotta

Tuscon/Scottsdale, Ariz.

Cumin-Spiced Pecans*

Café Escalera Sante Fe, N.M.

Pecan Crusted Salmon with Sorrel Sauce*

Paul's Restaurant Santa Fe, N.M.

Crispy Five-Spiced Duck with Asian Spiced Pecans and Gingered Peaches*

Santacafe Santa Fe, N.M.

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Sweet Potato Pecan Relish*

Boulevard

San Francisco, Calif.

Spinach Salad with Stilton Cheese, Candied Pecans and Apples

Spago

West Hollywood, Calif.

Cider Glazed Applewood Smoked Salmon with Pecans

Watercress and Endive Salad*

Loews Coronado Bay Resort

Coronado, Calif.

Roasted Pork Loin with Caramelized Root Vegetables, Red

Cabbage & Applesauce (and pecans)

Wildwood Restaurant & Bar

Portland, Ore.

Prosciutto & Bosc Pear Salad with Arugula, Gorgonzola & Pecans

Wildwood Restaurant & Bar

Portland, Ore.

Multi-Unit Restaurants

Pecan Chicken Salad

Ruby Tuesday

Airlines

Georgia Peach and Pecan Chicken Salad*

Delta Airlines (In-Flight Meal)

PECANS AND GEORGIA: AN HISTORICAL MATCH

ATLANTA - Long before Europeans arrived on these shores, native Americans were enjoying the pecans that grew wild from Illinois to the Gulf of Mexico, sometimes called the Mississippi Valley.

Pecans: A Staple of the American Indian's Diet

Native Americans are believed to have pounded pecan kernels, added them to boiling water and used the mixture as a seasoning for food. During the winter months the nuts were the main staple of their diet because there was little else available. Eventually, they introduced pecans to the early settlers of Georgia, one of the original thirteen colonies, and began exchanging the nuts for tools and trinkets.

For years, the popular nuts were called "Mississippi nuts" or "Illinois nuts" until the native American name, pecans, gained widespread use. President Thomas Jefferson, a recognized horticulturist and food connoisseur, was fond of pecans and had trees imported from Louisiana for planting at Monticello. But, it was a Louisiana slave named Antoine who was the first to successfully graft and cultivate pecan trees in 1846.

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An Industry Begins To Take Shape

Enterprising landowners saw the potential for profit in the domestic production of pecans. By 1871, several good-sized groves had been planted in most of the southeastern states, including Georgia.

By 1886, the *Southern Cultivator* reported that several individuals had successfully produced and marketed pecans on a small scale near Savannah, Ga. One man, Nelson Tift, established a 500-tree orchard in 1887, near Albany, Ga. and expanded his orchards to include 2,500 trees within two years. By 1889, there were still only 97 acres of pecans planted throughout Georgia compared with 1,000 acres in Mississippi and 2,000 acres in Louisiana.

The Golden Years of Horticulture

The years 1880 through 1900 were often considered the "Golden Years" of horticulture in the South. The pioneers of the pecan industry in Georgia included: G.M. Bacon of DeWitt; S.W. Peck of Hartwell and; James Tift and J.P. Gill of Albany. In addition, H.P. Stuckey's research on pecans while serving as director of Georgia's Agricultural Experiment Station, helped to establish the pecan industry.

Incidentally, many of the trees in Southwest Georgia were not planted to produce nuts, but rather as an investment in real estate. Between 1910 and 1925, real estate organizations and promoters planted thousands of acres in pecan trees. One company sold 25,000 acres of such orchards in five and ten acre units in Dougherty and Mitchell counties. The resulting production of pecans increased from approximately 27,000 pounds in 1900 to 2.5 million in 1920.

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Georgia Becomes Number One In Pecans: An \$80 Million Industry

Pecan production is centered in Dougherty County - around Albany - with orchards ranging in size from a few acres to several thousand acres. The area is known as "the pecan capital of the world," because of the large concentration of pecan trees in the area. In 1901 (95 years ago), the establishment of the Southern Nut Growers Association (later known as the National Nut Growers Association) in Albany, is credited with advancing the Georgia pecan industry.

By the 1950s, Georgia's pecan industry was well established and the state was number one in production. Today, the industry contributes \$80 million annually to the state's economy.

Georgia's 1995 pecan production was 75 million pounds. Other top producers in 1995: Texas, 60 million lbs; New Mexico, 39 million lbs; and Oklahoma, 20 million lbs.

In 1996: Georgia Pecan Wood Becomes Part of Olympic History

Georgia pecan growers donated 60 pecan trees to the Atlanta Committee for Olympic Games (ACOG). They were used to produce the handles for the more than 10,000 Olympic torches carried in the 15,000-mile U.S.A. relay and in the lighting of the Olympic flame at the Olympic stadium in Atlanta.

Aside from this place of honor in Olympic history, pecan lumber is also a favorite in the manufacturing of furniture, flooring and paneling.

X Appendices

A. REFERENCES

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