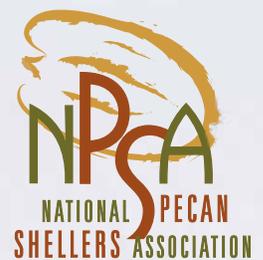
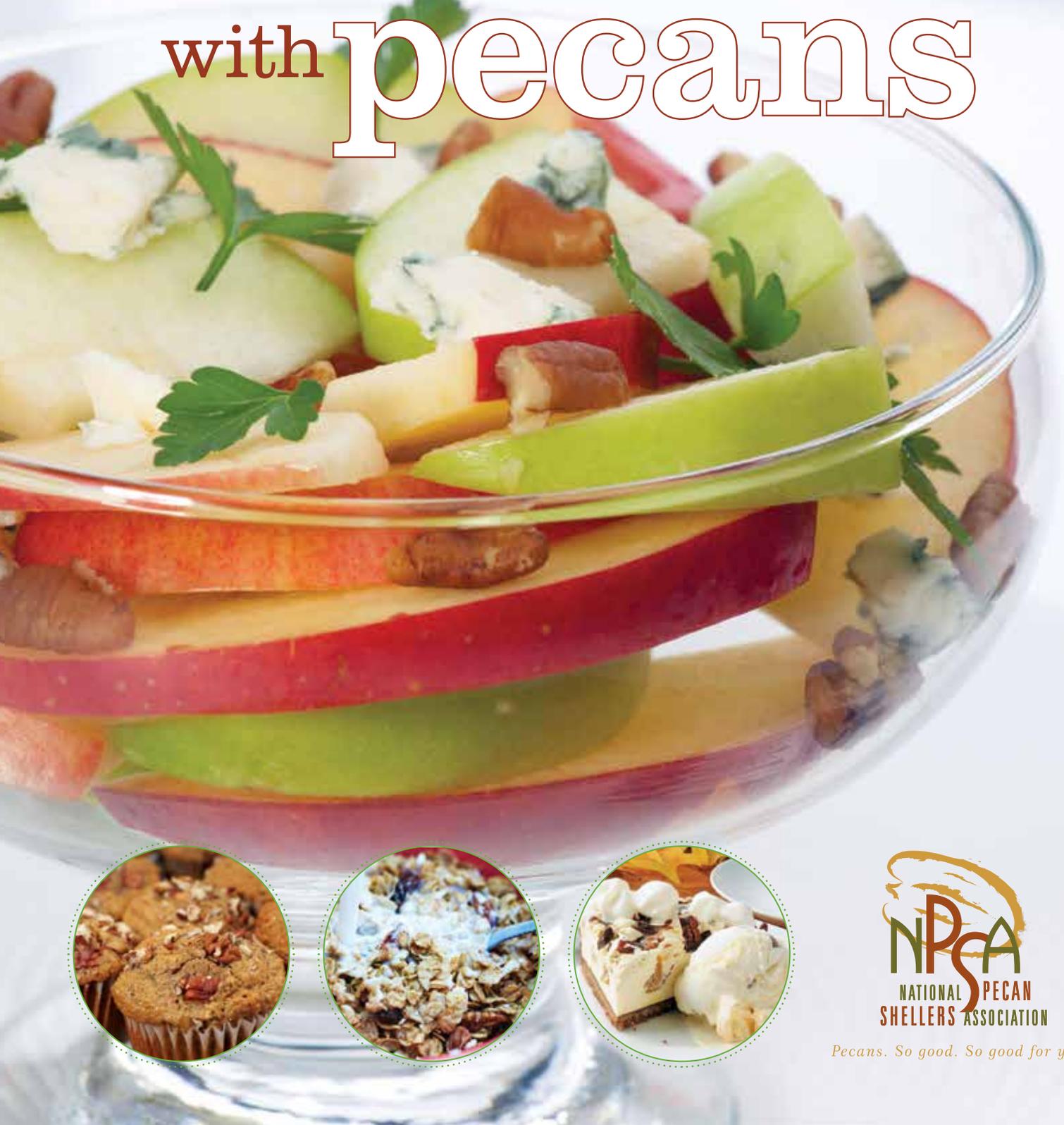


A Guide for Using Pecans

PERFECT PERFORMANCE with pecans



Pecans. So good. So good for you.

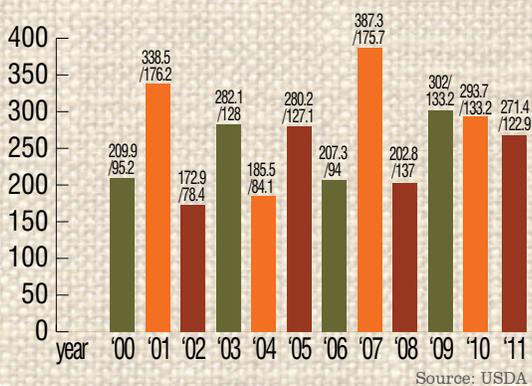
PRODUCTION & DISTRIBUTION

North America produces about 90 percent of the world's pecan crop and has achieved superior quality for pecans' use in prepared foods.

Several hundred varieties of pecans are grown and distributed throughout the pecan growing areas of the United States. States having significant production include Georgia, Texas, New Mexico, Arizona, Alabama, Oklahoma, Louisiana, Mississippi, Florida, North and South Carolina, and Arkansas. California, Tennessee, Kansas and Missouri also have marketable commercial crops. Varieties will differ in flavor, texture, size of nut, color, aroma and oil content. Harvesting, accumulation and marketing generally begin in October in parts of the "Pecan Belt" and extend into February and March the following year.

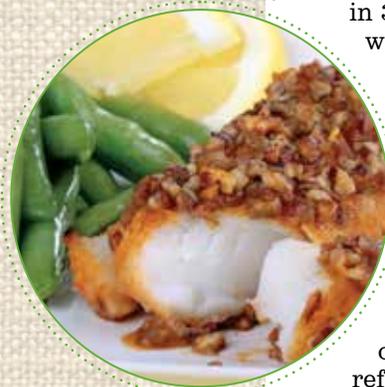
U.S. PECAN PRODUCTION

million pounds/kilograms



THE TOP 10 COMMERCIAL BUYERS OF PROCESSED PECANS

1. Retail grocers/ snack products
2. Commercial packers of mixed nuts & package nut products
3. Commercial baked goods manufacturers
4. Ice cream manufacturers
5. Confectioners
6. Wholesale distributors
7. Restaurants, hotels, resorts
8. Foodservice other than restaurants/hotels
9. Mail catalog sales
10. Cereal manufacturers



National Pecan Shellers Association, 2010 Industry Survey. Note: Exports excluded

USE & HANDLING

Harvesting & Grading

With a rich history tracing back to the 16th century, the pecan is the only major tree nut that naturally grows in North America. Globally, the largest pecan producer is the United States.

Mechanical harvesting techniques and prompt pick-up of pecans have helped to enhance the quality and extend the storage life of these tree nuts.

The pecan shell functions as a natural protective barrier. Although pecans have a hard, thick shell, they are easier to shell than many other North American nut species. Pecans go through rigorous sanitation to ensure product safety. Pecans are first rinsed to remove foreign objects. Then the pecans are either washed in chlorine, a hot sanitizing bath or a combination of the two. After shelling, the pecans are sized and then dried to reduce moisture and maintain quality. The wet shelling process significantly reduces the risk of aflatoxin, E. coli and Salmonella contamination.

Shelled nuts are graded to meet and exceed the U.S. Department of Agriculture Standards for Grades of Shelled Pecans. Pecans are inspected for any defects, foreign materials, uniformity in size and color, firmness and amount of meat in proportion to size. The top grade is U.S. No. 1.

Shipping

Pecan halves and pieces are generally shipped in 30 lbs./13.6 kg. corrugated boxes with or without vacuum-packed polyvinyl liners.

Shelling will reduce weight and bulk of inshell product by approximately one half.

Storage

Pecans should be protected from moisture, light, heat and oxygen to preserve freshness. Storing inshell pecans in a cool, dry place will preserve freshness for several months. In shell or shelled, pecans can be stored under refrigeration for about nine months, or frozen at 0° F/-17.7° C for up to two years. They can be thawed and refrozen repeatedly without loss of flavor or texture. After removal from cold storage, the quality remains good for about two months.

VALUE-ADDED ATTRIBUTES

FLAVOR

The extra full flavor of pecans can add a rich, meaty taste to salads, baked goods and savory prepared main dishes. The flavor is compatible with that of most foods and can be varied from their natural state to sweetened, salted or spiced.

USER-FRIENDLY

Chopped pecans offer labor savings to busy cooks.

AROMA

The characteristic sweet pecan odor is present primarily in pecan oils, enhancing the appeal in finished products.

TEXTURE

A soft crunch can add delicious contrast and extend chewy mouth-feel to salads, muffins, vegetable dishes and desserts.

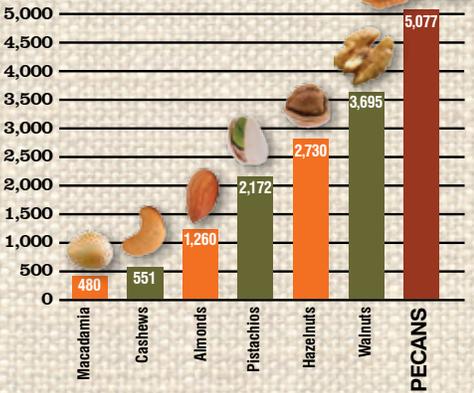
APPEARANCE

Pecans are classified according to the predominant skin color. Classifications range from "light" to "light amber," "amber" and "dark amber."



PECANS: TOP NUT FOR ANTIOXIDANTS*

TOTAL ANTIOXIDANTS
(micromoles per gram)



*Source: US Department of Agriculture, Agricultural Research Service. 2010. Oxygen Radical Absorbance Capacity (ORAC) of Selected Foods, Release 2. Nutrient Data Laboratory

Antioxidant-Rich Pecans

Naturally-occurring antioxidants in pecans may help contribute to heart health and disease prevention, according to a study published in *The Journal of Nutrition*. Antioxidants are dietary substances that are believed to delay aging and decrease the risk of cancer, heart disease, and neurological diseases like Alzheimer's. Researchers at Loma Linda University discovered that after eating pecans, gamma-tocopherols (a form of the antioxidant Vitamin E) doubled in their test subjects and unhealthy oxidation of LDL (bad) cholesterol decreased by as much as 33 percent. Pecans have more antioxidants than any other tree nut, according to the U.S. Department of Agriculture (USDA). Using a method called Oxygen Radical Absorbance Capacity (ORAC), researchers analyzed 277 different foods and found that pecans rank highest among all nuts in antioxidant capacity.



Cholesterol-Lowering Pecans

Pecans also may play a role in lowering cholesterol. Clinical research published in the *Journal of Nutrition* compared the Step-I diet (28 percent fat) recommended at the time by the American Heart Association for individuals with high cholesterol levels, to a pecan-enriched (40 percent fat) diet. The result was that the pecan-enriched diet lowered total cholesterol levels by 11.3 percent, and LDL "bad" cholesterol levels by 16.5 percent, twice that of the Step-I diet, without any associated weight gain. The U.S. Food and Drug Administration (FDA) has acknowledged this and related research and approved the following qualified health claim, "Scientific evidence suggests but does not prove that eating 1.5 ounces (.04 kg.) per day of most nuts, such as pecans, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease."



Nutrient-Dense Pecans

Pecans contain over 19 vitamins and minerals – including vitamin A, vitamin E, folic acid, calcium, magnesium, phosphorus, potassium, several B vitamins and zinc. One ounce of pecans provides 10 percent of the recommended Daily Value for fiber. Pecans are also a natural, high-quality source of protein that contains very few carbohydrates and no cholesterol.

Pecans May Provide Neurological Protection

Research published in *Current Topics in Nutraceutical Research* suggests that pecans may play a role in protecting the nervous system. The study, conducted at the Center for Cellular Neurobiology at the University of Massachusetts Lowell, demonstrates that pecans likely contributed to a delay in the progression of age related motor neuron degeneration in mice. Researchers suggest the antioxidants in pecans may be the reason for this positive sign.

Weight Control and Pecans

A review of pecan and other nut research, published in the *American Journal of Clinical Nutrition* (September 2003), suggests that nuts like pecans can aid in weight loss and maintenance. The review cited studies indicating that nut consumption may increase metabolic rates and enhance satiety. When used in conjunction with a low-fat diet, nuts also offer increased flavor, palatability and texture that can lead to greater dietary compliance, according to the review.



NUTRIENTS IN SHELLED PECANS

| Nutrients (Units) In: | 100 gms. | 1 lb. | 1 oz. serving |
|-----------------------|----------|--------|---------------|
| Calcium (mg) | 70 | 320 | 20 |
| Iron (mg) | 2.53 | 11.52 | 0.72 |
| Magnesium (mg) | 121 | 544 | 34 |
| Phosphorus (mg) | 277 | 1,264 | 79 |
| Potassium (mg) | 410 | 1,856 | 116 |
| Sodium (mg) | 0 | 0 | 0 |
| Zinc (mg) | 4.53 | 20.48 | 1.28 |
| Copper (mg) | 1.20 | 5.44 | 0.34 |
| Manganese (mg) | 4.50 | 20.48 | 1.28 |
| Selenium (mcg) | 3.80 | 17.6 | 1.1 |
| Vitamin C (mg) | 1.10 | 4.8 | 0.3 |
| Thiamin (mg) | 0.66 | 3.04 | 0.19 |
| Riboflavin (mg) | 0.13 | 0.64 | 0.04 |
| Niacin (mg) | 1.17 | 5.28 | 0.33 |
| Pantothenic Acid | 0.86 | 4 | 0.25 |
| Vitamin B6 (mg) | 0.21 | 0.96 | 0.06 |
| Folate (mcg) | 22 | 96 | 6 |
| Vitamin B12 (mcg) | 0 | 0 | 0 |
| Vitamin A (I.U.) | 56 | 256 | 16 |
| Vitamin K (mcg) | 3.50 | 16 | 1 |
| Vitamin E (ATE)* (mg) | 1.40 | 6.4 | 0.4 |
| Water (g) | 3.52 | 16 | 1 |
| Energy (Kcal) | 691 | 3,136 | 196 |
| Protein (g) | 9.17 | 41.6 | 2.6 |
| *Total Fat (g) | 71.97 | 326.4 | 20.4 |
| Monounsaturated | 40.8 | 185.12 | 11.57 |
| Polyunsaturated | 21.61 | 98.08 | 6.13 |
| Saturated | 6.18 | 28 | 1.75 |
| Trans | 0 | 0 | 0 |
| Carbohydrate (g) | 13.86 | 62.88 | 3.93 |
| Dietary fiber (g) | 9.6 | 43.2 | 2.7 |
| Ash (g) | 1.49 | 6.72 | 0.42 |

*Includes fatty acids, phospholipids and glycerols.

Source: USDA National Nutrient Database for Standard Reference, Release 17, 2004. <http://www.usda.gov/nlric/food comp, 2004>.

PECAN PRODUCTS

Nutritious, Versatile, Flavorful

Shelled pecans can be purchased in halves and in pieces. The pecans themselves vary in size, length, and color depending on the variety. These sizes range from Mammoth to Junior Mammoth, Jumbo, Extra Large, Large, Medium, and Topper. Select pecans in whatever size you need but always remember to choose quality. The best filled nuts, and those with good color, are considered highest quality.

Contact your supplier for specifications on the pecan product of your choice.



MAMMOTH HALVES
200-250 count per pound
440-550 per kg.



MEDIUM HALVES
551-650 count per pound
1201-1430 per kg.



LARGE/MEDIUM PIECES
Through 6/16" over 5/16"
Thru 9.5mm over 7.9mm



**SMALL HALVES
(TOPPERS)**
651-800 count per pound
1431-1760 per kg.



MEDIUM PIECES
Through 5/16" over 4/16"
Thru 7.9mm over 6.4mm



**JUNIOR MAMMOTH
HALVES**
251-300 count per pound
551-660 per kg.



MAMMOTH PIECES
over 9/19" screen
over 14.3mm



SMALL PIECES
Through 4/16" over 3/16"
Thru 6.4mm over 4.8mm



JUMBO HALVES
301-350 count per pound
661-770 per kg.



EXTRA LARGE PIECES
Through 9/16" over 8/16"
Thru 14.3mm over 12.7mm



MIDGET PIECES
Through 3/16" over 2/16"
Thru 4.8mm over 3.2mm



EXTRA LARGE HALVES
351-450 count per pound
771-990 per kg.



GRANULES
Through 2/16" over 1/16"
Thru 3.2mm over 1.6mm



LARGE HALVES
451-550 count per pound
991-1200 per kg.



LARGE PIECES
Through 8/16" over 6/16"
Thru 12.7mm over 9.5mm



MEAL
Through 1/16"
Thru 1.6mm