# THE PROOF FOR PECANS





### WHY PECANS ARE A TRENDING INGREDIENT FOR PRODUCT DEVELOPERS











## THE RISE OF THIS MIGHTY NUT

A flavor favorite and a nutrition powerhouse, pecans are cropping up in more and more snack innovations and are being heralded as the fastest growing nut in new snack applications.<sup>1</sup>

From creamy nut butters and spicy seasoned nuts to functional protein bars and even plant-based meat alternatives, pecans provide sought-after flavor and functional benefits that can enhance a variety of applications.



### **NEW LINE EXTENSIONS WITH PECANS** HAVE EXPLODED WITH 141% **GROWTH IN THE LAST DECADE**.<sup>2</sup>

OVER THE PAST DECADE, **NEW PRODUCT INTRODUCTIONS** FEATURING PECANS **INCREASED<sup>2</sup> BY** 

54%

No longer limited to the baking aisle, new pecan products and line extensions featuring pecans are hitting store shelves as consumers increasingly value the flavor and nutrition benefits of this superfood.





### REASONS PECANS CRACK OPEN NEW PRODUCT POTENTIAL

WITH WIDE-REACHING CONSUMER APPEAL, INCREDIBLE FLAVOR VERSATILITY, ENDLESS TEXTURE POTENTIAL, PREMIUM APPEAL AND SUPERFOOD NUTRITION, PECANS HELP PRODUCT DEVELOPERS CREATE STANDOUT FOODS AND BEVERAGES.





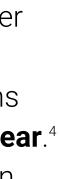
### CONSUMER APPEAL

With a long history of being a holiday favorite, pecans are now a sought-after nut in a wide range of nutritious foods and beverages available year-round. In fact, 77 percent of consumers like or love the rich, buttery flavor pecans bring to a finished product and **70 percent would like to enjoy pecans all year**.<sup>4</sup> And, Boomers are clamoring for pecans even more, with 78% seeking pecan products throughout the year.<sup>4</sup>

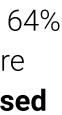
9 IN 10 **CONSUMERS ARE INTERESTED** IN PURCHASING PRODUCTS WITH PECANS.<sup>4</sup>

The appetite for pecans also translates to increased purchase intent for certain applications. An analysis by Datassential revealed that consumers are seeking pecans specifically in snacks like trail mixes, while still enjoying their use in desserts like cookies, pie and ice cream.

And, as consumer preferences change and new trends hit the marketplace, 64% of consumers said they will choose pecans more often given that pecans are a nutrient-dense superfood that fits into a variety of lifestyles like plant-based and keto eating plans.<sup>4</sup>







### FLAVOR VERSATILITY

Known for their rich, buttery texture and naturally sweet taste, pecans have a long tradition as an iconic nut for baking and confectionary applications.

But, given America's love for the flavor and pecan's ability to pair with a variety of flavor combinations, **product developers and research chefs are now looking outside these traditional categories** to capitalize on pecan's potential in a wide array of applications including protein bars, energy bites, savory spreads, cheese-based dips and even meat and dairy alternatives.

75% OF CONSUMERS THINK THE RICH, BUTTERY FLAVOR OF PECANS GOES WELL WITH A VARIETY OF INGREDIENTS AND FLAVORS.<sup>4</sup>

Pecans shine in a myriad of flavor profiles including sweet, spicy, smoky, salty and savory. Plus, they complement the trending "fusion flavors" where dual taste flavors mashup to create compelling combinations like sweet and spicy, sour and spicy, and the more traditional sweet and savory.





### **ENDLESS TEXTURE POTENTIAL**

Texture can help shape the sensory experience of the product and plays a pivotal role in formulation development. And, as **consumers demand fewer** ingredients and easier-to-recognize ingredient listings, product developers are seeing whole, real ingredients that can contribute texture to create tantalizing sensory experiences.

#### PECANS CAN HELP PROVIDE MULTIPLE IN-DEMAND TEXTURES WHILE **DELIVERING FUNCTIONALITY AND NUTRITION.**

From pleasing crunch, to comforting creaminess, to a satisfying chew, pecans deliver the perfect bite and help product developers tap into next-level texture and mouthfeel in a variety of applications.

Product developers and research chefs know auditory accompaniment of crunch plays a large role in how consumers identify and enjoy foods. That crunch — like that pleasing texture and sound of biting into a pecan-filled granola bar or a pecan praline topping – prolongs focus on the food and makes it more interesting and enjoyable longer.

Pecans also have a unique texture that can mimic the mouthfeel of meat, which makes it an ideal ingredient for plant-based meat products like crumbles and jerky that require that satisfying chew.

In both liquid and solid form, processed pecans can also deliver smooth creaminess to an application and help bring balance to a mixture of other textures. From pecan-nut butter to flavored pecan coffee creamer to decadent frozen novelties, pecans deliver smoothness and can functionally help bind ingredients.



### PREMIUM APPEAL

Pecans are special. The addition of pecans helps elevate the eating occasion, offers a more upscale quality to a finished product and adds value that some consumers are **willing to pay more** for.

FOR THOSE WHO DESIRE PECANS, THE MAJORITY WILL PAY MORE FOR THOSE PRODUCTS

INCLUDING SNACKS, TRAIL MIXES, COOKIES, PIE AND ICE CREAM.<sup>2</sup>

As more and more manufacturers include on-pack claims to communicate the premium custom nutrition of a product, pecans can be included in a variety of in-demand categories including plant-based, gluten-free, grainfree, dairy-free, clean label, keto and paleo.







### SUPERFOOD NUTRITION

When is comes to pecans, great taste is just the beginning. Pecans pack a nutritious punch with a unique mix of health-promoting nutrients and **bioactive compounds**. Each one-ounce serving of pecans has 12g of "good" monosaturated fat, 36mg of plant sterols, 11% DV of dietary fiber and 10mg of flavonoids - which makes pecans an ideal superfood for product formulation.

### THE MACRONUTRIENT PROFILE OF PECANS IS APPEALING TO MANY PEOPLE:

PROTEIN (3 GRAMS), CARBOHYDRATE (4 GRAMS) AND FAT (20 GRAMS)





Source: USDA National Nutrient Database for Standard Reference Serving size = 1 ounce or about 19 halves DV = % Daily Value

## DELICIOUS KERNELS OF GOODNESS

Pecans are a complex whole food with multiple health-promoting nutrients and bioactive compounds.

**PHYTONUTRIENTS** 10 MG OF FLAVONOIDS 35 MG OF PLANT STEROLS

**PLANT PROTEIN** 3 GRAMS OF PLANT-BASED PROTEIN

**FAT CONTENT** 18 GRAMS OF MONOUNSATURATED FAT, INCLUDING OLEIC ACID (ONLY 2 GRAMS OF SATURATED FAT)

FILLING DIETARY FIBER GOOD SOURCE OF DIETARY FIBER, 11% DV

**ANTIOXIDANT VITAMINS** 8 MCG OF BETA CAROTENE, OR PROVITAMIN A 7 MG GAMMA-TOCOPHEROLS, A FORM OF VITAMIN E

**ESSENTIAL MINERALS** A TRIO OF ESSENTIAL MINERALS: 60% DV MANGANESE, 40% DV COPPER AND 10% DV ZINC



## A HEART-SMART<sup>\*</sup>FOOD

Like other nuts, pecans contain primarily unsaturated fats, but they're among the highest in monounsaturated fats, especially the beneficial oleic acid that's found in olive oil.<sup>5</sup>

Four landmark observation studies<sup>6,7,8,9</sup> have found an association between total nut consumption (peanuts and tree nuts) and a significantly decreased risk of heart disease. The greatest reduction of heart disease risk and deaths from heart attacks was among people who ate five or more 1-ounce servings of nuts per week. Observational studies establish associations, not causality, and not all findings from observational studies have been confirmed in controlled, randomized clinical trials. Pecans are the third most frequently consumed tree nut in the country.<sup>10</sup>

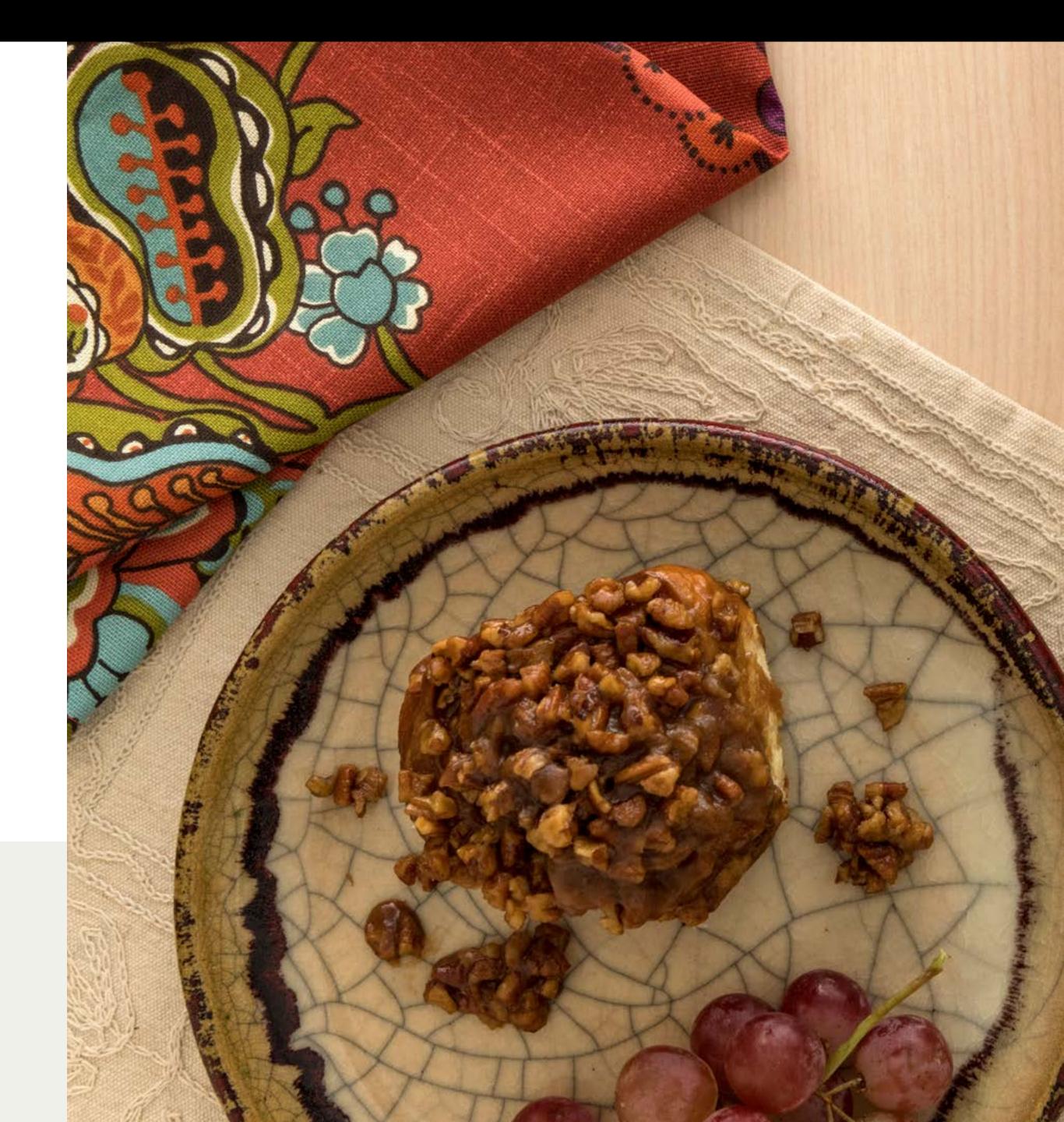
While pecans are increasingly featured in functional foods, they're still a dessert and confectionary favorite. In fact, the addition of pecans adds a nutritious element to these sweets, which consumers are constantly seeking.

For more information on the health-related research, visit eatpecans.com.

\*Scientific evidence suggests but does not prove that eating 1.5 ounces per day of most nuts, such as pecans, as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease. U.S. Food and Drug Administration

GIVEN THE NUTRITION BENEFITS OF PECANS,

67% OF CONSUMERS FEEL BETTER PURCHASING AN INDULGENT FOOD WITH PECANS.<sup>4</sup>



# **INSPIRATION FOR PECAN INNOVATIONS**



### Tap into today's trends with these pecan product concepts developed in partnership with Culinex that showcase unique product and consumer benefits.

**PRODUCT FORMS:** CHOPPED | MEAL

## Concept 1: SOFT CHEESEBALL BITES

**Pecan-crusted cheeseball bites** for **on-the-go keto snacking.** These bite-size snacks feature crunchy, roasted chopped pecans and creamy savory real cheddar. They are great on their own for an afternoon snack or a perfect complement to any charcuterie board.

#### FLAVOR INSPIRATIONS:

**SWEET AND SAVORY KETO PECAN CHEESE:** CRUNCHY HONEY ROASTED PECANS WITH REAL CHEESE AND TOASTED COCONUT.

**SMOKED HICKORY PECAN AND GOUDA:** SEASONED WITH BLACK PEPPER.

**TOASTED PECAN, PORT AND CREAMED OLD AMSTERDAM CHEESE:** CLASSIC COMBINATION OF SWEET PORT, UNCTUOUS DUTCH CHEESE, FEATURING CHOPPED TOASTED PECANS.

#### TRENDS:

LOW CARB AND KETO UNEXPECTED INCLUSIONS BOLD FLAVORS CHARCUTERIE ALL-DAY SNACKING



**TRENDS**: **GLUTEN FREE** SAVORY BREAKFAST PREMIUM APPEAL **VEGAN SNACKING ALL-DAY SNACKING** 

#### **PRODUCT FORMS:** CHOPPED | HALVES

## Concept 2: GLUTEN-FREE PECAN SNACKING GRANOLA

Gluten-free crunchy granola clusters include protein from pecans, and nutrients and fiber from chia, flax seeds and oatmeal. This naturally sweet granola can be a **great jumpstart** to your day.

#### **FLAVOR INSPIRATIONS:**

**OVERNIGHT PECAN OATMEAL:** CRUNCHY PECANS (HALVES AND CHOPPED) ALONG WITH OATS TO DEVELOP INTO A LUXURIOUS, CREAMY RICH PORRIDGE COMPLEMENTED BY CRANBERRIES, FLAX, AND CHIA SEEDS.

**SWEET AND SPICY WAKE UP GRANOLA:** PECAN-FOCUSED GRANOLA FEATURING SWEET AND SPICY FLAVOR PROFILE OF MAPLE AND CAYENNE.

**PECAN SUNRISE TRAIL MIX:** CRUNCHY-CHEWY CLUSTERS OF GLAZED PECANS, CRISP CHEESE PUFFS, ROASTED PEPITAS, DRIED BLUEBERRIES AND TOASTED COCONUT.



**PRODUCT FORMS:** HALVES | CHOPPED | MEAL | OIL

## Concept 3: SUPER FUNCTIONAL PECAN BUTTER

**Upgrade your peanut butter** to this healthy superfood pecan butter that will change your PB&J into a **superfood powerhouse**.

#### **FLAVOR INSPIRATIONS:**

**POWER PECAN BUTTER WITH SUPERFRUIT JAM:** NUTRIENT-FORTIFIED, CREAMY PECAN BUTTER SWIRLED WITH ACAI, POMEGRANATE, MONTMORENCY TART CHERRY AND BLUEBERRY JAM WITH COLLAGEN POWER FOR A COMPLETE PROTEIN SPREAD.

**GENIUS PECAN BUTTER + BUTTER:** A MORE LUSCIOUS NUT BETTER WITH NATURAL DAIRY BUTTERY TONES AND SAVORY **UMAMI NOTES FROM ROASTED PECANS.** 

**MUSHROOM PECAN BUTTER:** NUTRIENT-FORTIFIED, NATURALLY SWEET PECAN BUTTER BLENDED WITH A TOUCH OF SMOKEY DARK CHOCOLATE AND THE ADDITION OF LION'S MANE MUSHROOMS, WHICH ARE OFTEN REFERRED TO AS THE **"SMART MUSHROOM."** 

#### **TRENDS**:

SUPERFOOD NUTRITION **KETO** PLANT BASED **FLAVOR VERSATILITY PREMIUM APPEAL** NUT BUTTERS CHARCUTERIE ACCOUTREMENT







TRENDS: **PLANT BASED FLAVOR VERSATILITY COMFORT FOODS** VEGAN

**PRODUCT FORMS:** HALVES | CHOPPED | MEAL

## Concept 4: PECAN BLENDED MEAT ALTERNATIVE

This pecan-based, plant-forward meat substitute is a tantalizing twist for your next taco, quesadilla or bolognese sauce.

Made with high-quality ingredients, this meat alternative crumble provides the texture and nutrition to help supplement your meal.

#### **FLAVOR INSPIRATIONS:**

**MISO RICE WINE PECAN AND MUSHROOM DUXELLE:** A JAPANESE FLAVOR BLEND FOR AN **UMAMI FORWARD PLANT-BASED STIR-FRIED YAKI SOBA.** 

**HEARTY VEGAN CHILI:** GROUND AND CHOPPED PECANS, SMOKEY CHILI POWDER, AND A TOMATOEY MIX OF BEANS, ROASTED ONION AND GARLIC.

**RUSTIC ITALIAN BOLOGNESE:** HERB-FORWARD TOMATO SAUCE FEATURING PECAN GROUND 'BEEF' WITH HEARTY VEGGIES AND ROBUST FLAVOR.





**PRODUCT FORMS:** CHOPPED | MEAL

## Concept 5: MINI BROWN BUTTER PECAN ICE CREAM SANDWICHES

Plant based brown butter and pecan milk ice cream are perfectly sandwiched between pecan shortbread for a mini frozen snack that is packed with wholesome ingredients.

#### **FLAVOR INSPIRATIONS:**

**GINGER MOLASSES SWIRL PECAN ICE CREAM:** SALTED GINGER MOLASSES SWIRLED IN CLASSIC BUTTER PECAN ICE-CREAM FILLED PECAN SABLE COOKIES.

**BOURBON PECAN PIE:** PECAN PRALINE COATED BOURBON BUTTER PECAN MINI-ICE-CREAM BARS OR DIPPED STRAWBERRIES.

**HYBRID ALTERNATIVE MILK BASE:** GOOD FATS AND MOUTHFEEL FROM PECANS AND SUPPLEMENTED WITH OTHER MILK ALTERNATIVES LIKE OAT AND SOY.

#### TRENDS:

PLANT BASED **PORTION CONTROL** NEWSTALGIA SIMPLE INGREDIENTS **NEW SNACKING** 





**PRODUCT FORMS:** MEAL

## Concept 6: WORKOUT RECOVERY PECAN MILK

A performance-focused, ready-to-drink beverage for busy, on-the-go athletes or fitness enthusiasts seeking superfood nutrition.

**FLAVOR VERSATILITY** 

#### **FLAVOR INSPIRATIONS:**

**FUNCTIONAL PECAN COCONUT POWER DRINK:** ATHLETES WILL REJOICE FOR THE DAIRY-FREE PRE- OR POST-WORKOUT BEVERAGE MADE FROM COCONUT AND NUTRIENT-DENSE PECANS.

**CHOCOLATE BANANA PECAN FUEL:** CHOCOLATE AND BANANA NATURALLY ENHANCE THE FUNCTIONALLY OF PECANS WITH REPLENISHING MANGANESE FOR METABOLISM HEALTH.

SAGE, SASSAFRAS AND TART CHERRY CHAI: A RICH, WARMING BEVERAGE FEATURING TRADITIONAL NORTH AMERICAN FLAVORS.





Shelled pecans can be purchased in a variety of options to provide product developers different formats to achieve formulation goals including texture, binding, thickening and extending.

Pecans vary in size, length and color depending on the variety. There are more than 1,000 varieties of pecans.







#### HALVES

Pecan halves are ideal for **snacks and confectionaries**. Add halves to snack mixes, coat or enrobe them in ontrend flavors and seasonings or use halves for **substantial** crunch and visual appeal in clusters and confectionary.

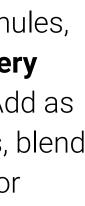
#### CHOPPED

Available in large, medium, small, extra small and granules, this format can be economical for bars, dairy or bakery **applications** where pecans would be diced anyway. Add as an inclusion for bars, enhance texture in baked goods, blend into dips, sauces or butters, or craft pecan creamers or dairy applications by soaking and straining.

#### MEAL

Made of ground pecans, meal can partially substitute flour in baked goods, used as a coating or binding agent for snack bites or add crunch and texture to crusts. bars and baked goods. In addition, meal can help offset expensive ingredients by **extending portion sizes** of your meat-based applications like dips and sauces without hurting your bottom line.







## PECAN SIZES

### The chart below shows the standard sizes for each category.



JUMBO HALVES 301-350 count per pound (661-770 per kg)



EXTRA LARGE HALVES

351-450 count per pound (771-990 per kg)



JUNIOR MAMMOTH HALVES

251-300 count per pound (551-660 per kg)



MAMMOTH HALVES

200-250 count per pound (440-550 per kg)



#### LARGE/MEDIUM PIECES (CHOPPED)

through 6/16" over 5/16" (through 9.5 mm over 7.9 mm)



#### MEDIUM PIECES (CHOPPED)

through 5/16" over 4/16" (through 7.9 mm over 6.4 mm)



LARGE PIECES (CHOPPED)

through 8/16" over 6/16" (through 12.7 mm over 9.5 mm)



**EXTRA LARGE PIECES** (CHOPPED)

through 9/16" over 8/16" (through 14.3 mm over 12.7 mm)

#### TO SOURCE PECANS FOR NEW PRODUCT INNOVATIONS, FIND A LIST OF SUPPLIERS AT:

### WWW.EATPECANS.COM/SHELLER-DIRECTORY



MEDIUM HALVES 551-650 count per pound (1201-1430 per kg)



SMALL HALVES (TOPPERS)

651-800 count per pound (1431-1760 per kg)



MAMMOTH PIECES (CHOPPED)

> over 9/19" screen (over 14.3 mm)

> > a have a

MEAL

through 1/16" (through 1.6 mm)



LARGE HALVES

451-550 count per pound

(991-1200 per kg)

SMALL PIECES (CHOPPED)

through 4/16" over 3/16" (through 6.4 mm over 4.8 mm)



GRANULES

through 2/16" over 1/16" (through 3.2 mm over 1.6 mm)



**EXTRA SMALL PIECES** (CHOPPED)

through 3/16" over 2/16" (through 4.8 mm over 3.2 mm)





## STORAGE AND HANDLING

Pecans unique fat and oil profile provides nutritious properties, but also makes them susceptible to oxidation. Shelled pecans are packed in vacuum-packed cans, jars, glass, cellophane bags or poly-lined boxes to protect against factors such as humidity, oxidation and light.

Pecans should be kept in air-tight packaging, stored away from foods with strong odors, refrigerated (for inventories up to nine months) or frozen (for inventories longer than nine months and up to two years). Pecans can be thawed and re-frozen repeatedly during the two-year freezing period without loss of flavor or texture.

> KEEP PECANS FRESH AND FLAVORFUL BY REFRIGERATING OR FREEZING IN AIR-TIGHT PACKAGING.

To help extend the shelf life, product developers can consider the following mitigation techniques to reduce lipid oxidation:

- 1 Create a barrier between pecans and oxygen.
- **2** Use opaque packaging.
- **3** Use resealable bags on products when possible.
- 4 Encase pecans in products.
- 5 Use coatings like sugar, chocolate, starches and gums.



American Pecan Promotion Board

3880 Hulen Street

#### **FIND A SUPPLIER**

To source pecans for new product innovations, find a list of suppliers at www.eatpecans.com/sheller-directory.

Suppliers can provide more exact product specifications and options for product development.

# EAT PECANS

AMERICAN PECAN PROMOTION BOARD

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<sup>1</sup>Information Resources Inc. MULO+C, 52 weeks ending 12/26/2021.

<sup>2</sup> Mintel. Global New Product Database (GNPD), 2022.

<sup>3</sup>Mintel. Nuts, Seeds and Trail Mix Report, 2022.

<sup>4</sup>Datassential. Custom Research fielded November 2022, an online survey of 1,500 consumers representing the general population.

<sup>5</sup>USDA National Nutrient Database for Standard Reference, Release 28, May 2016.

<sup>6</sup> Fraser GE, Sabate J, Beeson WL, Strahan TM. A Possible Protective Effect of Nut Consumption on Risk of Coronary Heart Disease: The Adventist Health Study. Arch Intern Med. 1992;152(7):1416-1424.

<sup>7</sup>Hu FB, Stampfer MJ, Manson JE, Rimm EB, Colditz GA, Rosner BA, Speizer FE, Hennekens CH, Willet WC. Frequent nut consumption and risk of coronary heart disease in women: prospective cohort study. British Medical Journal. 1998;317:1341-1345.

<sup>8</sup> Hudthagosol C, Haddad EH, McCarthy K, Wang P, Oda K, Sabate J. Pecans acutely increase plasma postprandial antioxidant capacity and catechins and decrease LDL oxidation in humans. Journal of Nutrition. 2011;141-56-62.

PHaddad E, Jambazian P, Karunia M, Tanzman J, Sabate J. A pecan-enriched diet increases y-tocopherol/cholesterol and decreases thiobarbituric acid reactive substances in plasma of adults. Nutrition Research. 2006;26:397-402.

<sup>10</sup> Economic Research Service, USDA, 2021.

