



Natural,  
versatile,  
delicious

# BAKING

with California Sunshine



## CALIFORNIA WALNUT COMMISSION

As a non-profit organization of the state of California, the California Walnut Commission (CWC) represents the interests of the walnut industry. This encompasses over 4,800 California walnut farmers and nearly 100 processing, packaging and export companies.

As a point of contact for the food industry, CWC offers assistance in the processing of walnuts and guidance in developing new products.



California Walnut Commission

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### PRODUCT INFORMATION FOR BAKERIES AND PASTRY SHOPS

## THE CRÈME DE LA CRÈME FROM CALIFORNIA — PERFECT IN BAKED GOODS

California walnuts are grown in the sun and available all year. Their mild flavor makes them the ideal ingredient in sweet and savory breads, pastries, crusts and other baked goods, and their premium quality allows them to be processed in versatile ways. Walnuts from California adhere to some of the strictest food safety regulations in the world and meet or exceed both USDA and State of California regulations.

Consumers in Europe regard walnuts to be a premium nut product at an acceptable price point. This makes them all but predestined for use in a wide spectrum of products in the mid- to high-end baked-good sector.

Walnuts are nutrient-rich and add value consumers will recognize and appreciate. As the only tree nut that has a significant amount of the plant-based Omega-3, alpha linolenic acid, walnuts are extremely appealing to health-conscious consumers as well: The benefits in terms of cardiac health were officially confirmed by the EFSA health claim, and indicating this on the label can make baked goods that feature walnuts especially attractive.



### STRICT STANDARDS IN QUALITY AND FOOD SAFETY

- Standardized agricultural and harvesting methods
- Regular monitoring by legal authorities in the US (including the USDA, FDA and CDFA)
- Rapid harvesting with automated harvesters, which means all of the nuts on a tree are gathered quickly
- Immediate stabilization: Gentle professional grade drying methods used within a few days of the harvest ensure freshness and quality
- Standardized drying methods bring moisture content to 8%

### PROPER STORAGE

Shelled walnuts are a semi-fresh raw material. Their shelf life can be greatly affected by temperature, light and humidity. When stored properly, they can easily be kept for up to one year:

- Use within 6 months when stored between 2°C to 5°C (35°F to 40°F)
- Use within 12 months when stored at -18°C (0°F)
- Store in a dark place
- 55 — 65% relative humidity
- Keep in an airtight odor-neutral container to avoid absorbing odors from other ingredients/foods

### OTHER FACTORS WHICH HAVE AN IMPACT ON WALNUTS' SHELF LIFE:

- The surface area of the nut: they should not be broken up or ground until right before use
- The surface material of the grinder or chopper: inert materials reduce the nuts' susceptibility to oxidize (stainless steel is better suited than steel or similar materials)

## PRODUCT DEVELOPMENT WITH WALNUTS

To manufacture premium-quality baked goods with California walnuts, you have to keep certain factors in mind.

### FLAVOR

Thanks to their mild flavor and pleasant texture, California walnuts are ideal for use in sweet and savory baked goods as well as more neutral bakery products such as bread. They contain tannins and catechins which give typical California walnuts their very mild bitter note, a taste which harmonizes beautifully when combined with hints of spices or sweetness.



### HEATING

Special heating processes such as roasting or caramelizing can have an impact on walnuts' moisture content, flavor, color and in some cases their microbiological profile. To lower the risk of off-notes or other quality flaws, temperatures should not exceed 145°C; temperatures below 125 °C are more advisable. This is why we do not recommend baking walnuts on the surface of baked goods.

Blending them into the dough or otherwise folding them into a mixture protects them against excessive heat more effectively. Walnuts that are to be placed on the outside of a product as a visual or design element should be held in place with something sticky like a glaze. Gentle handling at lower temperatures and a prolonged resting period can have a clear positive effect on walnuts' flavor and shelf life. The temperature is of much greater importance here than the heating period.

### MOISTURE

Product applications with longer shelf lives need a lower overall moisture content in the finished product, since a greater moisture content can contribute to off-notes forming. One helpful approach is to store the nuts at low temperatures. For sweet applications, coat them with sugar or chocolate for example. In fresh products with a shorter shelf life, the moisture content does not play as great a part. It should be noted that the texture of the walnuts might become slightly softer. This can be partially offset by using the right kind of non-water soluble coating medium.

### PREVENTING OXIDATION

To prevent rancidity and extend finished product shelf life, the finished product should be packaged with materials that do not allow light or air to come into contact with the product.

### LOWERING THE MICROBIOLOGICAL COUNT

One method of lowering the microbiological count on the surface of the walnuts is to treat them with saturated steam in a vacuum. When applied professionally, this has no impact on the walnuts' quality or shelf life. It is only through this process that walnuts can be used in micro-biologically sensitive products without affecting the quality.

### WALNUT PIECES IN BATTERS

Walnut pieces will sink to the bottom of a wet batter and cause uneven nut distribution in the finished baked good. Pre-coating the walnut with gum or starch will keep the nut suspended. Alternatively, lightly toasting the walnuts will dehydrate them and make them lighter, which will improve the final suspension.