The California Walnut Industry

Keywords
California walnut industry, California walnut shelling machine, California walnut cracking machine, California walnut processing machinery, California walnut shelling, shelled California walnut machine

Abstract
California has the largest walnut production in the US and its walnut industry has strict processing standards from hulling, grading and shelling to packaging, thus it can supply ample high-quality walnuts to the world. Along with the growing consumer awareness of walnut healthy value, there is the growing demand for California walnuts both domestic and global.

California’s walnut industry started in the 1860s in the southern part of the state before migrating north to the Central Valley. Walnuts rank 15th on the list in terms of overall monetary value of the 400 different crops grown in California. Today, the Central Valley of California is the state’s main walnut growing area with over
220,000 acres of walnut orchards, which account for 99 percent of US production. The California walnut industry is made up of more than 4,600 growers and 90 processors whose walnuts are shipped to more than 40 countries and represent three-fourths of world trade. This can be attributed to not only the growing popularity of walnuts as a healthy snack but also to the quality consciousness of the walnut handlers that has helped California walnuts become a much sought after brand.

California Walnut Processing
The California walnut processors continue to adopt cutting edge processing equipment, such as high-quality walnut cracking and shelling machine, to deliver a product that is nutritious and safe and meets rigorous international quality standards.

Walnut Hulling
Once the walnuts are harvested, pre-cleaners are used to clean the walnuts so they are ready for hulling. A huller removes the outer green hull and the nut is mechanically dehydrated to the optimum moisture content namely 8 percent which can prevent deterioration of the nut and protect its quality during storage. Hulled walnuts are transported to nearby packing plants and are stored until needed for cracking and shelling.

Walnut Grading
Walnuts are transported to a packing plant where they are graded based on usage, in-shell or shelled. Shelled walnuts are further graded by color. Walnut kernels are screened and separated into different sizes.

Walnut Shelling
Walnuts are mechanically cracked and shelled by walnut shelling machine. The shelled material is air-separated and screened for size and sent to electronic laser-sorting units for kernel color and shell removal. The product is then packed for shipment to the market place.
Shelled Walnuts Sizes and Their Applications

California shelled walnuts are available in various sizes according to the USDA Standards for Grades of Shelled Walnuts. Here are some examples.

Walnut Halves

Size: 7/8 or more of the kernel is intact. 85% or more of lot, by weight, are half kernels with the remainder three-fourths half kernels.

Applications: trail mixes, confectionary, garnishing and decorating baked goods, and whole nut snack mixes.

Larger Pieces

Size: Portions of kernels in lot cannot pass through 24/64 inch (9.53mm) round openings.

Applications include trail mixes, energy bars, frozen dairy inclusions and baked good toppings.

Small Pieces

Size: Portions of kernels in lot pass through 24/64 inch (9.53mm) round openings but cannot pass through 8/64 inch (3.18mm) round openings.

Applications: seasoning blends, baking mixes, breading mixes and frozen dairy topping.

Walnut Meal

The smallest form of the California walnut comes in various consistencies ranging from a coarse meal to a fine powder. It can be used to thicken soups and sauces, replace gluten containing flour, reduce carbohydrate content, increase fiber and help create richer texture. It also can be used in seasoning blends and breading mixes.

California Walnut Kernel Colors

California walnuts may be color sorted to meet specific product needs. Here are four
Extra Light: No more than 15% shall be darker than extra light of which only 2% (included in the 15%) may be darker than light.

Light: No more than 15% shall be darker than extra light of which only 2% (included in the 15%) may be darker than light.

Light Amber: No more than 15% shall be darker than light amber of which only 2% (included in the 15%) may be darker than amber.

Amber: No more than 10% shall be darker than amber.

The Demand for California Walnuts

Due to the growing consumer awareness of the versatility and nutritional benefits of walnuts, the domestic demand for walnuts increases too. Recently California walnuts were certified as a heart healthy food by the American Heart Association and can now carry the Heart-Check mark on packaging. Supported by the strength of a naturally healthy product, the walnut industry continues to grow, and walnut growers and processors look forward to a fertile future.

Global demand for California walnut has raised walnuts to the fourth leading export from the state, valued at approximately $820 million. The industry has experienced record growth in the last five years; the value of walnuts may top $1.5 billion in farm gate revenue. Export now account for 60 percent of shipments with strong demand from Asia, Europe and the Middle East. New emerging markets, such as India, will play a vital role in developing the industry’s future consumers. In conclusion, the domestic market development and continued expansion of export markets benefit to the development of walnut industry.