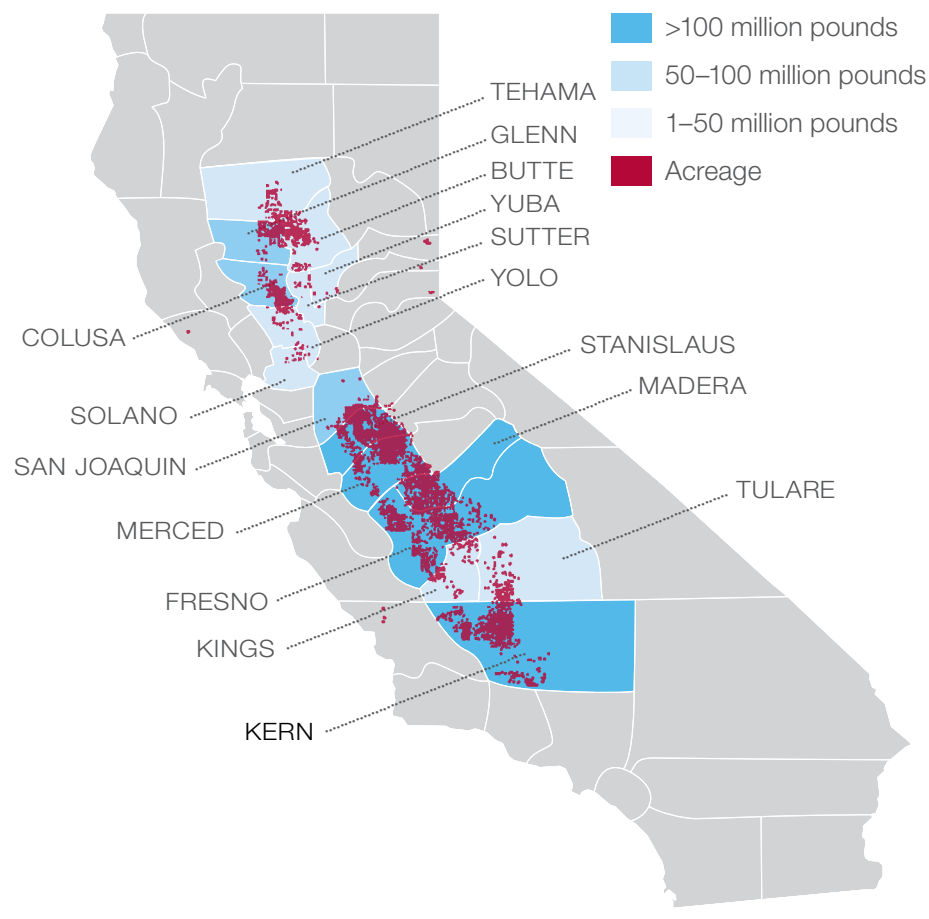


Guide to California Almonds

Almond Production by County



Composition of Whole Natural Almonds

100 grams, edible portion

PROXIMATE	MINERALS	VITAMINS
Food Energy 575 KCAL	Calcium 264.0 mg	Vitamin E* 26.2 mg
Protein 21.2 g	Iron 3.7 mg	Thiamin (B1) 0.2 mg
Total Lipid (fat) 49.4 g	Magnesium 268.0 mg	Riboflavin (B2) 1.0 mg
Saturated Fatty Acids 3.7 g	Phosphorus 484.0 mg	Niacin 3.4 mg
Monounsaturated Fatty Acids 30.9 g	Potassium 705.0 mg	Vitamin B6 0.1 mg
Polyunsaturated Fatty Acids 12.1 g	Sodium 1.0 mg	Pantothenic Acid 0.5 mg
Cholesterol 0.0 g	Zinc 3.1 mg	Folate 50.0 mcg
Dietary Fiber 12.2 g	Manganese 2.3 mg	

*Alpha-tocopherol.
DISCLAIMER: The range of values obtained through various private and government investigators are true and accurate to the best knowledge. Variations may occur due to crop differences year to year. Analyses and ranges of values obtained by various private and governmental sources may vary from actual data obtained from current and future crops.
Source: USDA National Nutrient Database for Standard References, Release 24 (2011).



Varieties/Sizes*

Variety	Classification	Shell	Nut	18/20	20/22	23/25	25/27	27/30	30/32	32/34
NONPAREIL	Nonpareil	Soft shell, light color, high suture opening	Medium, flat shape, smooth surface							
CARMEL	California type	Soft shell, good shell integrity, fair suture opening	Medium, narrow shape, slightly wrinkled surface							
BUTTE	California type, Mission type	Semi-hard shell, light color, smooth surface, low suture opening	Small, short plump shape, wrinkled surface							
PADRE	California type, Mission type	Hard shell, good shell integrity, no suture opening	Small, short wide shape, wrinkled surface							
MISSION	Mission type	Hard shell, good shell integrity, no suture opening	Small, short wide shape, dark brown, deeply wrinkled surface							
MONTEREY	California type	Hard shell, smooth surface, low suture opening	Large, long narrow shape, deeply wrinkled surface							
SONORA	California type	Soft shell, dark brown color, rough surface, high suture opening	Large, long narrow shape, light color, smooth surface							
FRITZ	California type, Mission type	Semi-hard shell, good shell integrity, low suture opening	Small, medium plump shape, fairly wrinkled surface							
PRICE	California type	Soft shell, dark brown color, rough surface, high suture opening	Small, short narrow shape, fairly wrinkled surface							
PEERLESS	California type, In-shell/hard shell	Hard shell, good shell integrity, smooth surface, no suture opening	Medium, wide shape, fairly wrinkled surface							

*Size and/or shape varies by year.

USDA Grades

Grade	Whole Kernels	Minimum Diameter (inches)	Dissimilar	Doubles	Chip & Scratch	Foreign Material	Particles & Dust	Split & Broken	Other Defects	Serious Defects	Undersize
US Fancy	—	—	5%	3%	5%	.05%	.1%	1%	2%	1%	—
US Extra No. 1	—	—	5%	5%	5%	.05%	.1%	1%	4%	1.5%	—
US No. 1 (Supreme)*	—	—	5%	15%	10%	.05%	.1%	1%	5%	1.5%	—
US Select Sheller Run	—	—	5%	15%	20%	.1%	.1%	5%	3%	2%	—
US Standard Sheller Run	—	—	5%	25%	35%	.2%	.1%	15%	3%	2%	—
US No. 1 Whole & Broken	30%	20/64 UOS†	5%	35%	x	.2%	.1%	x	5%	3%	5%
US No. 1 Pieces	x	8/64	x	x	x	.2%	1%	x	5%	3%	5%

x No limit established. — Also included in "Other Defects." — Includes max. 2% under 20/64 inch. — Includes max. 5% under 20/64 inch. % also included in "Chip & Scratch."

*US No. 1 is commonly referred to by industry as Supreme. However, Supreme is not a USDA grade. †UOS = Unless Otherwise Specified. (Effective 3/24/97)



USDA Grading Parameters

Parameter	Description
DISSIMILAR	Typically used for whole almond applications or for further processing such as blanching and roasting.
DOUBLES	Two kernels developing in one shell. One side of a double kernel is flat or concave.
CHIP & SCRATCH	Loss of kernel skin as a result of mechanical processing. Greater than 1/8" (3.2mm) in diameter, it is defined as injury; if affecting, in aggregate, greater than 1/4" (6.4mm) in diameter, it is defined as defect.
FOREIGN MATERIAL	Pieces of shell, hulls, or other foreign matter that will not pass through a round-opening screen measuring 8/64" (3.2mm) in diameter.
PARTICLES & DUST	Fragments of almond kernels or other material that will pass through a round-opening screen measuring 8/64" (3.2mm) in diameter.
SPLIT & BROKEN	Seven-eighths or less of complete whole kernels that will not pass through a round-opening screen measuring 8/64" (3.2mm) in diameter.
OTHER DEFECTS	Any defect that materially detracts from the appearance of the individual kernel or the edible or shipping quality of the almonds. The defects include gum, shrivel, brown spot, discolored, chipped and scratched kernels greater than 1/4" (6.4mm) in diameter.
SERIOUS DEFECTS	Any defect that makes a kernel or piece of kernel unsuitable (includes decay, rancidity, insect injury and damage by mold).

Forms

Form	Common Specifications	Typical Applications
WHOLE NATURAL OR BLANCHED	USDA grades for natural almonds; processor or customer specifications for blanched almonds	Natural, roasted or flavored snacks Embedded or enrobed in chocolate Ingredients for confectionery, energy bars, bakery Inputs for processing
SLICED NATURAL OR BLANCHED	THICKNESS Thick: 1.5–1.8 mm Regular: 1.1–1.4 mm Thin: 0.7–1.0 mm Extra Thin: 0.5–0.7 mm	Topping for salads Ingredient for cereal Coating for savory dishes Garnishing for baked goods, desserts
SLIVERED BLANCHED	THICKNESS Regular: 3.0–5.0 mm Medium: 4.0–6.0 mm	Ingredient for baked goods, cereal Texture for confectionery Topping for prepared foods, salads
DICED NATURAL OR BLANCHED	THICKNESS Large: 28/18.....28/64" & 18/64" (11.1 & 7.1 mm) Medium: 22/8.....22/64" & 8/64" (8.7 & 3.2 mm) Small: 12/8.....12/64" & 8/64" (4.8 & 3.2 mm) Fine: 8/0.....8/64" (3.2 mm)	Topping for dairy items, baked goods Coating for ice cream bars Filling for bakery or confectionery Crust for meats, seafood
MEAL OR FLOUR NATURAL OR BLANCHED	Coarse ground Fine ground (Grinders and screens determine particle size)	Sauce thickener Ingredient and filling for confectionery Flavor enhancer in bakery Coating for fried foods
BUTTER, PASTE NATURAL OR BLANCHED	Alternative to other nut butters	Filling for chocolate, cereal bars, confectionery, bakery
OIL	COMMON SPECIFICATIONS Cold-pressed, light and pale amber color	TYPICAL APPLICATIONS Cooking oil, non-food (e.g., cosmetics, moisturizer)