

Let the Grade Be Your Guide in Buying Food

By Sara Beck, Elizabeth Crosby, and Martha Parris

Food quality is . . . taste? price? appearance? tenderness? color? texture? nutritional value? freshness? wholesomeness? It can be all of these, none of these, or something else, depending upon your point of view — what you expect or want or need. However you define food quality, you can often judge it just by looking at a particular product.

You can also look for the grade name on the label — such as USDA Prime, U.S. Grade A, or U.S. Fancy. These grade names represent levels of quality which have been defined by the U.S. Department of Agriculture (USDA) and are based on characteristics unique to each food. For example, quality in beef is determined by evaluating maturity, color, firmness, texture, and marbling (flecks of fat within the lean). Quality in butter is measured by flavor, body, color, and salt. These and other factors can determine a food's relative value — its usefulness, desirability, marketability — and hence its price. The process of sorting foods according to quality levels, or grades, is called grading.

Meat, poultry, eggs, fresh and processed

fruits and vegetables, dairy products, and fish may be graded for quality. The special considerations for each food group are described in this chapter. In addition a reference chart lists foods that are graded, and summarizes what the grades mean.

Certain things are common to the grading of all foods. Grading is performed by Federal employees or federally licensed graders on the basis of U.S. standards. Food packers and processors voluntarily request grading and must pay for it. Costs generally average only a fraction of a cent per unit of food purchased by the shopper. The place where food is graded is usually inspected and meets certain standards.

In most cases, all grades for any one food have virtually the same nutritive value. All grades are useful and there is a grade for every use. Grade standards are revised as needed to reflect changes in production, use, and marketing practices. Foods which have been graded are not required by Federal law to be grade labeled at retail, although some States and local areas may require it.

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How Food Grades Started

In the early 1900s more and more people were relocating in cities and towns farther and farther away from agricultural areas. Wholesale food buyers were less able to examine products before agreeing to buy them. The telephone and telegraph were no help as sellers and buyers could not adequately describe their products or their expectations with such subjective terms as “good,” “best,” “choice,” etc.

USDA established definitions — or standards — for the different quality levels of various foods and set up a food grading system to provide a universal language for producers, processors, packers, distributors and others marketing food. The first U.S. food grade standards were for potatoes in 1917, followed by butter in 1919, beef in 1926, and poultry in 1930, among others. In 1924 butter manufacturers asked USDA for permission to grade label their prod-

Grading is performed by federal employees or federally licensed graders on the basis of U.S. standards. This meat grader is measuring the ribeye muscle of a beef carcass to determine the yield grade or amount of usable red meat in the carcass.



ucts for consumers. By the 1930s the USDA grade mark could also be found on beef, lamb, turkeys, eggs, chickens, and canned fruits and vegetables.

Meats — Only meat which has first passed a strict mandatory inspection for wholesomeness may be voluntarily graded for quality. The shield-shaped quality grade mark should not be confused with the round inspection mark which means the animals were healthy, the products truthfully labeled and not adulterated. Because *beef* can vary so much in quality, it takes eight grades to span the range. The top three are generally the only ones you see at the retail store. They are USDA Prime, Choice, and Good. The lower grades of beef usually go into processed products. Processed products themselves are not graded, only the carcasses.

Prime means the ultimate in tenderness, juiciness, and flavor. It has abundant marbling — flecks of fat within the lean meat — which enhances both flavor and juiciness. Choice grade beef will be very tender, juicy, and flavorful. It has slightly less marbling than Prime, but still is very high quality. Good grade beef is very uniform in quality and somewhat leaner than the higher grades. This grade is relatively tender, but because it has less marbling it lacks some of the juiciness and flavor of the higher grades. Many times a retail store will carry meat labeled with a store brand. Store brand meat would probably qualify for the Good grade or the lower end of the Choice grade if it were graded by USDA.

The yield of usable meat from a beef carcass can vary greatly regardless of quality grade. This variation is caused, primarily, by differences in the amount of

fat on the outside of the carcass. Beef carcasses must be graded for yield at the same time they are graded for quality. Yield Grade 1 denotes the highest yield, and Yield Grade 5 the lowest. If you're buying large cuts, quarters, or sides for your home freezer, the yield grade can make a big difference.

Grades for Lamb, Veal, Pork

The grades for lamb are Prime, Choice, Good, Utility and Cull. Grade depends on the proportion of meat to bone, the color and texture of the lean meat, the firmness of meat and marbling. Most of the federally graded lamb on the retail market is USDA Prime or Choice.

There are five grades for veal and calf. USDA Prime veal is light grayish-pink to light pink and fairly firm and velvety; the bones are small, soft, and quite red. The carcass is given a lower grade as the lean meat becomes less firm, more moist, coarser in grain, and darker in color, and as size of bones increases. When calf is available in retail stores, it is generally graded USDA Choice or Good.

Unlike beef, lamb and veal, pork is not graded with quality grades. However, the appearance of pork serves as an important guide to quality. It should have a high proportion of lean meat to fat and bone. The flesh should be firm, fine textured and grayish-pink or slightly darker.

Meat Cuts — Regardless of grade, some beef cuts are more tender than others. Those that lie along the center part of the animal's body next to the backbone are the most tender. They usually command a higher price in the retail store. They include the rib, the short loin, and the loin end. Cuts of meat from these areas — rib steak, porterhouse,

T-bone — can be cooked by the dry heat method: broiling, grilling, roasting, pan-broiling, and pan-frying.

The less tender cuts — chuck, round, flank, brisket, plate and shank — are usually slightly less expensive and should be cooked with moist heat for best results. Moist heat methods include braising, stewing, boiling, and simmering. Sometimes a less tender cut such as blade chuck steak or top round steak can be tenderized first (marinated, pounded) and then broiled.

Because of the young age of the animals, most lamb, veal and pork cuts can be cooked by the dry heat method. One of the most important things to keep in mind is to plan menus in advance and select cuts appropriate for the recipe you're using.

Beef and lamb can be cooked to the degree of doneness of your liking — rare, medium, or well-done. Veal should be cooked well-done to make it tender and palatable. It needs longer cooking because it has more connective tissue than other meats. Fresh pork should be cooked to an internal temperature of 170° F (or until the juices run clear). Fully cooked, cured pork can be eaten without further heating, but reheating to an internal temperature of 140° F enhances the flavor. To eliminate guesswork and to make sure you don't overcook, use a meat thermometer. Cooking with low temperatures and cooking to just the right degree of doneness causes less shrinkage and a more palatable product.

Precepts for Poultry

U.S. Grade A is the highest quality grade for poultry and the one commonly found in stores. Grade A poultry has good con-

formation, fleshing, and fat covering, and is free of pinfeathers and various defects. U.S. Grade B or U.S. Grade C poultry is usually sold without the grade mark, or the meat is cut from the bone and used in further processed foods such as pot-pies, soup, and hotdogs. When poultry grades below U.S. Grade A, often it is due to improper handling during transportation and processing which causes cuts or tears in the skin, exposed flesh, broken bones, bruises, or discoloration.

Conformation, Fleshing. Shape or structure of the bird determines to a considerable degree the distribution and amount of meat. Certain defects in structure affect this and detract from the appearance. The drumsticks, thighs, and breast carry most of the meat.

Fat, Pinfeathers. The natural layer of fat in the skin should be of sufficient quantity to prevent the appearance of the flesh through the skin, especially on the breast and legs. Fat contributes moisture and flavor. Processing techniques should all but eliminate pinfeathers.

Defects. Exposed flesh, cuts and tears in the skin, broken bones, missing parts, bruises, and discolorations detract from the overall appearance and sales value of poultry. If severe, they can also affect eating quality. Air reaching the skin and meat will cause them to dry out and discolor. When this occurs during long periods of storage, it is called "freezer burn."

Poultry grading has to do with appearance and eating quality, not wholesomeness. All poultry and poultry products must be inspected for wholesomeness before being graded. Inspected poultry must not be adulterated and must be

truthfully labeled. Tenderness is determined by the age of the bird and dictates the cooking method to use.

Young birds are tender and suitable for roasting, broiling, frying, rotisserie cooking, barbecuing, and ovenbaking. Young chickens may be labeled: rock cornish game hen, broiler, fryer, roaster, or capon. Other classes of young poultry may be labeled: fryer-roaster turkey, young turkey, young hen, young tom, young broiler duckling, fryer duckling, roaster duckling, young goose, young

guinea, and squab (pigeon).

Older, mature birds are less tender and need long, slow cooking — simmering, steaming, braising, pressure cooking — to make them tender and develop their fuller flavor. Mature chickens may be labeled: hen, fowl, baking and stewing chicken. Other mature poultry is rarely available in retail stores.

Egg Quality and Sizes

Fresh, high quality eggs are readily available today. Eggs are the freshest and at



their peak of quality the moment they are laid. Totally automated systems can gather, wash, sort, size, package, label, and cool them — all in the same day. Eggs often move from farm to store in 1 or 2 days. If handled properly, they will retain their high quality for several weeks after being put in the refrigerator at home.

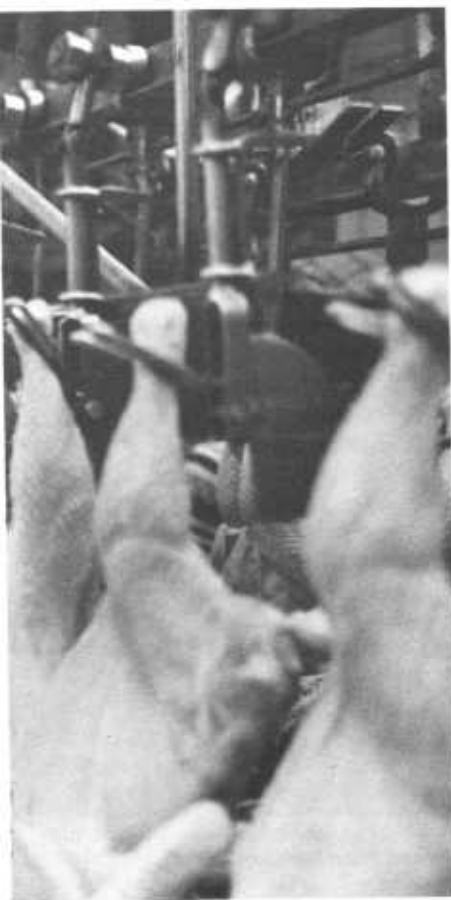
Understanding egg quality grades, which are based on factors directly related to freshness and quality, and egg sizes will help you be a better egg buyer and user.

It is important to remember that quality and size are not related — they are entirely different.

Quality — The shield-shaped mark found on egg cartons indicates the eggs have been graded under the Federal-State egg grading program. A grade designation without this mark means the eggs were graded according to State egg laws which have standards and grades based on Federal regulations. U.S. Grade AA is the top grade, while U.S. Grade A is the quality most often sold in stores. The grades are determined by the condition of the white and yolk, freedom from defects, and the shape, soundness, and cleanliness of the shell. Keep eggs cool to maintain quality. Purchase eggs from refrigerated cases in the store and put them into the refrigerator at home as quickly as possible.

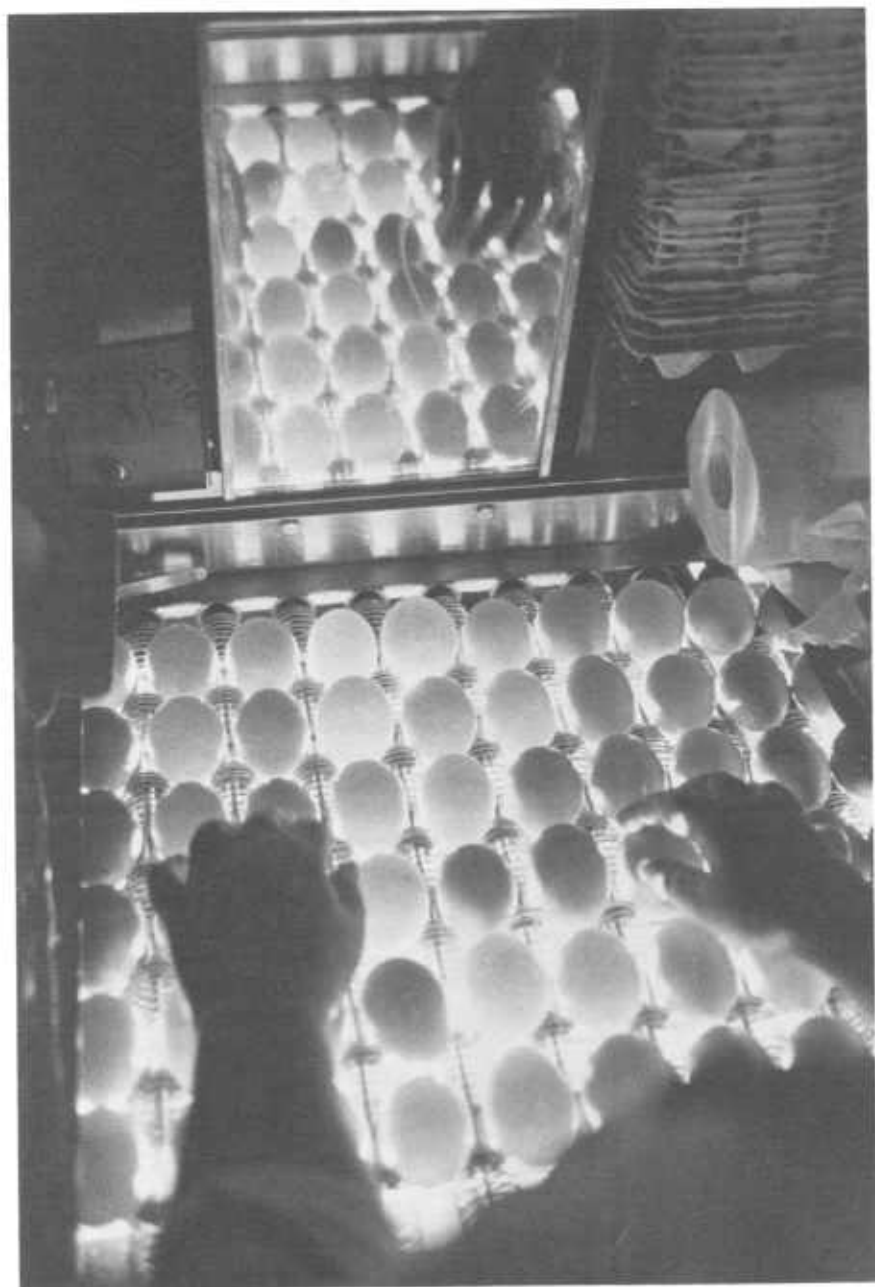
Fresh, high quality eggs cover only a small area when broken out of the shell. They have a large amount of thick white that stands high and firm around the yolk, which also stands high. Over time the white becomes thinner, losing water into the yolk and carbon dioxide through the pores of the shell. The older egg spreads out and covers more area when broken out of the shell, thus looking larger. The yolk, having absorbed water from the white, increases in size, becomes somewhat flattened on top, and appears “out-of-round.”

The thickness of the white of a fresh egg



John F. Kuchta

All poultry and poultry products must be inspected for wholesomeness before being graded. This poultry is being graded at a poultry plant in Eldorado, Ark.



David F. Warren

Fresh, high quality eggs are readily available today. The eggs shown are going through an automated system that includes candling, which is used to detect defects inside eggs.

can cause it to stick to the shell when the egg is hard-cooked and peeled. Older eggs are usually easier to peel, so plan to buy eggs ahead of time for hard-cooking. Eggs usually are washed before being cartoned. This process removes the natural coating which covers the pores of the shell, so the washed eggs are often coated with a harmless, tasteless, odorless oil. It covers the pores and retards loss of water and carbon dioxide from the eggs, thus helping preserve quality. Small blood spots, though unattractive, can easily be removed with a spoon and the egg is perfectly good to eat. The spots occur occasionally because of a slight malfunction in the hen's reproductive system.

Cracked Eggs — Do not buy cracked or dirty eggs. They may contain bacteria in or on the shell that might cause food poisoning. If you do find cracked or dirty eggs in a carton, use them only in thoroughly cooked dishes. Wash soiled eggs in warm water immediately before using.

Cracked eggs found in cartons are often caused by mishandling in the store or en route to the store. Processors try to remove all the cracked and leaking eggs they can detect before the eggs are put into cartons. Sometimes, however, slight cracks cannot be detected at the plant and may become visible later. The shells must be virtually free from major stains and foreign material. Slight stains or specks on the shell, often caused by the cage housing the laying hen, are quite harmless.

Egg Sizes — Sizes are based on weight, not on how large the eggs look. Eggs are weighed on automatic scales in egg packing plants and cartoned according to the

Egg sizes based on weight.

Official U.S. Weight Classes (Sizes)	Minimum Weight Per Dozen Eggs Ounces
Jumbo	30
Extra Large	27
Large	24
Medium	21
Small	18
Peewee	15

minimum weight per dozen. Extra Large, Large, and Medium are the most common sizes. Most recipes have been developed on the basis of Large eggs.

Grades for Dairy Products

Butter, cheddar cheese, and instant nonfat dry milk are the dairy products most commonly found in stores with the grade shield. *Butter* grades are assigned on the basis of flavor, body, color, and salt. Quality of the milk from which the butter is made directly affects the final grade. Most butter sold in consumer packages is identified with the USDA grade shield, and is either U.S. Grade AA or A.

Cheddar cheese is graded on factors such as flavor, body, texture, finish, appearance, and color. U.S. Grade AA cheddar cheese has a fine, pleasing flavor; a smooth, compact texture; and uniform color. In addition, there are grades for Swiss (Emmentaler) cheese, Colby, and Monterey (Monterey Jack) cheese. *Instant nonfat dry milk* is evaluated for flavor, appearance, bacterial estimate, milkfat, moisture, scorched particles, acidity, and ability of the product to dissolve when mixed with water. U.S. Extra Grade is the only grade for instant nonfat dry milk.

Regular nonfat dry milk, dry whole milk, dry buttermilk, and dry whey are generally sold to producers of ice cream, bakery products, meat products, and manufacturers of blended food products. Characteristics evaluated to determine grades of these products are similar to those used for instant nonfat dry milk. For other dairy products, such as cottage cheese and pasteurized process cheese, USDA has a quality-approved shield which may appear on the carton if the products comply with established quality criteria.

The shield-shaped mark found on dairy products indicates the products have been evaluated by USDA. The term "Grade A" without the shield-shaped mark means the products meet Grade A production and processing requirements of the State, county, and municipality where they were produced. It often appears on containers of fresh fluid milk and milk products. Local requirements based on recommendations of the U.S. Public Health Service encourage a high level of milk sanitation and promote greater uniformity of product and production requirements.

Fish — Unlike other food discussed in this chapter, fishery products are the responsibility of the U.S. Department of Commerce (DOC), National Marine Fisheries Service (NMFS). The Packed Under Federal Inspection (PUFI) Mark identifies those fresh, frozen, or canned products certified by NMFS inspectors or other Federal or State cross-licensed inspectors to be safe, clean, wholesome, and properly labeled.

Grading is an added step in which the quality level of certain products is determined and certified. Grade A means top

or best quality and is the only grade labeled on fish products in the supermarket. It means the products are uniform in size, practically free of blemishes and defects, in excellent condition, and possess good flavor for the species. Products of Grade B and C quality usually are marketed without any grade designations.

When buying fresh fish, make sure the fish have bright clear eyes which have not sunk into the head. The fish should be free of odor. Gills should be reddish-pink. The flesh should be firm and spring back when gently pressed with the finger. When buying frozen fishery products, read the label. Make sure the package is intact and unbroken. Avoid packages stacked above the freezing area of the store's display freezer. Take only solidly frozen packages. Avoid packages that show moisture or ice. At home, check the contents. Both breaded and unbreaded products should have a clean, uniform appearance. Individual pieces should be easily separated and not frozen together. Breading or coating should be essentially intact.

Fresh Fruits and Vegetables

Consumers will find fresh produce sold in consumer-size bags, baskets, trays or cartons or in bulk displays where they can select the quality and size desired. U.S. No. 1 is the chief trading grade for fresh produce, and the most likely to be seen on packages of fresh fruits and vegetables. It is also the most prevalent quality produced by nature. A limited amount of U.S. Fancy (the premium quality) is also available, usually in specialty stores at premium prices. Produce most likely to be grade-labeled at retail are apples, carrots, grapefruit, onions, oranges, and potatoes, in packages rather than bulk displays.

Fresh fruits and vegetables are graded primarily on a visual basis. Color, blemishes, shape, and skin texture are among external factors judged according to U.S. standards. The standards define these defects and set limits or tolerances for them. In addition there are limits for off-size fruits and vegetables and internal defects, which are not always evident on the surface but are considered in determining quality. While overall tolerances for defects may be the same in all grades, the severity of defects differs among the grades. For example, an orange may have a scar that is slightly rough, light brown, and about the size of a dime and be considered top quality. However, a rougher, darker, or larger scar could count against the percentage of defects allowed.

When shopping for fresh fruits and vegetables: *Buy in season.* Quality is usually higher, and prices more reasonable, when you buy fruits and vegetables in season. *Buy only what you need.* Home refrigeration makes it possible to keep an adequate supply of most perishable produce on hand, but never buy more than you can properly refrigerate and use without waste — even if the produce is cheaper in quantity. *Do not pinch!* Rough handling of fruits and vegetables while you are selecting them causes spoilage and waste. Such loss to the grocer usually is passed on to the consumer, so your costs go up when produce is carelessly handled. When you must handle a fruit or vegetable to judge its quality, use thoughtful care to prevent injury.

Processed Fruits and Vegetables

U.S. grade standards for canned, frozen, and dried fruits and vegetables and other related products like jams and jellies are generally based on color, uniformity of

size, absence of defects, and character (tenderness, texture, and maturity). Flavor is also evaluated. You will find a number of these products grade-labeled for consumers, particularly jams and jellies, and frozen or chilled citrus products. You might find the U.S. grade name by itself or in a shield.

The U.S. grade is a good guide on how to use the fruit or vegetable product. Grade A fruits and vegetables are the best selection when appearance and texture are most important. These fruits and vegetables are carefully selected for color, tenderness, and freedom from blemishes, and they are the most tender, succulent, and flavorful. Grade B fruits and vegetables are good for most uses, and those of Grade C quality are usually a thrifty buy and just right for use in cooking.

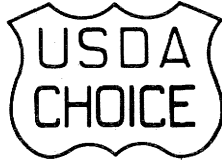
You may find processed fruit and vegetable products labeled with a grade name, such as Grade A, without the U.S. in front. In some instances, absence of the U.S. means that quality of the product has not been certified by USDA. Some manufacturers process and grade their products using the voluntary U.S. standards without using the official USDA grading service, and some of these processors then label their products according to grade. If the grade name is used, however, the product must measure up to that quality or it could be considered not truthfully labeled.

In addition many stores, particularly chain stores, carry two or more qualities under their own name labels (private labels) that are usually packed by U.S. grade. The higher the grade, the higher the quality — and sometimes the price.

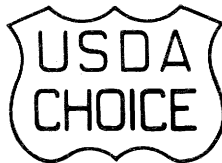
Food**Current Grade Names****What the Grades Mean**

Meat

Beef

*USDA
PRIMEVery tender, juicy, flavorful;
has abundant marbling (flecks
of fat within the lean).*USDA
CHOICEQuite tender and juicy, good
flavor; slightly less marbling
than Prime.USDA
GOODFairly tender; not as juicy and
flavorful as Prime and Choice;
has least marbling of the three.

Lamb

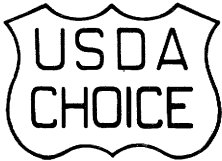
*USDA
PRIMEVery tender, juicy, flavorful;
has generous marbling.*USDA
CHOICETender, juicy, flavorful; has
less marbling than Prime.

Food**Current Grade Names****What the Grades Mean**

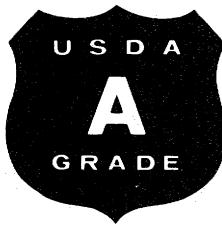
Veal

*USDA
PRIME

Juicy and flavorful; little marbling.

*USDA
CHOICE

Quite juicy and flavorful; less marbling than Prime.

PoultryChickens
Turkeys
Ducks
Geese*U.S.
Grade A

Fully fleshed and meaty; uniform fat covering; well formed; good, clean appearance.

U.S.
Grade B

Not quite as meaty as A; may have occasional cut or tear in skin; not as attractive as A.

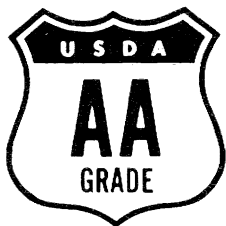
U.S.
Grade C

May have cuts, tears, or bruises; wings may be removed and moderate amounts of trimming of the breast and legs are permitted.

*Indicates grades most often seen at retail

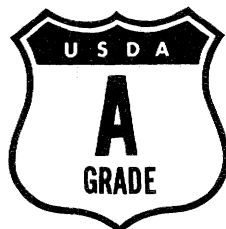
Food	Current Grade Names	What the Grades Mean
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Eggs



*U.S.
Grade AA

Clean, sound shells; clear and firm whites; yolks practically free of defects; egg covers small area when broken out—yolk is firm and high and white is thick and stands high.



*U.S.
Grade A

The same as AA except egg may cover slightly larger area when broken out and white is not quite as thick.

U.S.
Grade B

Sound shells, may have some stains or shape may be abnormal; white may be weak and yolk enlarged and flattened; egg spreads when broken out.

Dairy Products

Instant nonfat dry milk



*U.S.
Extra Grade

Sweet, pleasing flavor; natural color; dissolves readily in water.

Food	Current Grade Names	What the Grades Mean
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Butter



*U.S.
Grade AA

Delicate sweet flavor and smooth texture; made from high quality fresh sweet cream.



*U.S.
Grade A

Pleasing flavor; fairly smooth texture; made from fresh cream.

U.S.
Grade B

May have slightly acid flavor or other flavor or body defects.

Cheddar cheese



*U.S.
Grade AA

Fine, pleasing Cheddar flavor; smooth, compact texture; uniform color.

U.S.
Grade A

Pleasing flavor; more variation in flavor and texture than AA.

*Indicates grades most often seen at retail

Food	Current Grade Names	What the Grades Mean
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Fish



*U.S.
Grade A

Uniform in size, practically free of blemishes and defects, in excellent condition, and having good flavor for the species.

U.S.
Grade B

May not be as uniform in size or as free of blemishes or defects as Grade A products; general commercial grade.

U.S.
Grade C

Just as wholesome and nutritious as higher grades; a definite value as thrifty buy for use where appearance is not an important factor.

Fresh Fruits and Vegetables

The grade is more likely to be found without the shield.

*U.S.
Fancy

Premium quality; only a few fruits and vegetables are packed in this grade.



*U.S.
No. 1

Good quality; chief grade for most fruits and vegetables.

U.S.
No. 2

Intermediate quality between No. 1 and No. 3.

U.S.
No. 3

Lowest marketable quality.

Processed Fruits and Vegetables and Related Products

Canned and frozen fruits and vegetables.



*U.S. Grade A

Tender vegetables and well-ripened fruits with excellent flavor, uniform color and size, and few defects.

U.S. Grade B

Slightly mature vegetables; both fruits and vegetables have good flavor but are slightly less uniform in color and size and may have more defects than A.

U.S. Grade C

Mature vegetables; both fruits and vegetables vary more in flavor, color, and size and have more defects than B.

Dried or dehydrated fruits. Fruit and vegetable juices, canned and frozen. Jams, jellies, preserves. Peanut butter. Honey. Catsup, tomato paste.



*U.S. Grade A

Very good flavor and color and few defects.

U.S. Grade B

Good flavor and color but not as uniform as A.

U.S. Grade C

Less flavor than B, color not as bright, and more defects.

*Indicates grades most often seen at retail