
Part IV

DIVERSITY IN CURRENT FOOD GRADING

Diversity in Current Food Grading

Federal grades provide information on the sensory characteristics of the major food categories. The current grading program administered by AMS of USDA is voluntary/mandatory. There are problems with the current Federal food-grading program, among them confusing nomenclature for grades and a general lack of useful information conveyed by them to consumers.

The present confusion is a result of over 50 years of USDA allowing industry considerable latitude in deciding the grade nomenclature to be used so that there would be some degree of standardization. The reason for this latitude is that grading is optional: Industry has the option of not using the USDA grading system if it does not care for the USDA standards or grade designations for their products. Because different industries have differing concerns and requirements (or at least perceive them differently), the result is the present diversity of grades. USDA views this as an inherent problem of the current voluntary/mandatory system,¹ and therefore appears to give industry most of what it wants to have at least some degree of participation.

USDA indicates that, because some products are naturally more variable than others, it is necessary to have more grades for some products than for others. Quality, in general, refers to the usefulness, desirability, and value of a product—its marketability—but the precise definition of quality depends on the commodity.² Certain general characteristics, both objective and subjective, are used to determine a **product's** quality. Some of these characteristics are color, uniformity, flavor, blemishes (if applicable), size, texture, and maturity. Most are sensory judgments, but an increasing number of objective (measured by instrument) standards are used when they are economically feasible.

The four AMS divisions manage Federal marketing and grading services for their par-

ticular food product. Each division has its own grading standards and nomenclature, different not only between the divisions but also within them (table 2).

Within the Dairy Division, for example, butter is graded and has the grade printed on the retail package. Flavor, aroma, texture, and the quality of the cream from which it is made are some of the criteria in grading butter (see figure 4).

According to the USDA "How To Buy" series for fresh fruits and vegetables, the top grades for fresh fruits and vegetables are usually either U.S. Fancy or U.S. No. 1. However, another pamphlet by the AMS Fruit and Vegetable Division states that U.S. Fancy, U.S. No. 1, and U.S. No. 2 are the order of grades for most fresh fruits and vegetables that are graded. This pamphlet also indicates that other grade names—U.S. Extra No. 1, U.S. Extra Fancy, and U.S. Combination—are used

¹USDA Pamphlet. "USDA Grade Standards for Food, How They Are Developed and Used," p. 9, August 1974.

²*Ibid.*, p. 5.

Table 2-Nomenclature for Selected USDA Food Grades

AMS Division	Food Product	Nomenclature for				
		Top Grade	2nd Grade	3rd Grade	4th Grade	
DAIRY	Butter Cheddar Cheese Instant Nonfat Dry Milk	U.S. Grade AA U.S. Grade AA "U. S. Extra Grade"	U.S. Grade A U.S. Grade A	U.S. Grade B		
FRUITS AND VEGETABLES	Fresh:	Cantaloupes	U.S. Fancy	U.S. No. 1	U.S. Commercial	U.S. No. 2
		Cucumbers	U.S. Fancy	U.S. Extra No. 1	U.S. No. 1	
		Peas	U.S. Fancy	U.S. No. 1		
		Potatoes	U.S. Extra No. 1	u. S. No. 1	U.S. Commercial	U.S. No. 2
		Watermelons	U.S. No. 1	U.S. Commercial	U.S. No. 2	
	Processed:	Fruits	Grade A or Fancy	Grade B or Choice	Grade C or Standard	Substandard or cull
	Vegetables	Grade A or Fancy	Grade B or Extra Standard	Grade C or Standard	Substandard or cull	
POULTRY	Poultry Eggs	U.S. Grade A U.S. Grade AA or Extra Fancy	U.S. Grade B U.S. Grade A	U.S. Grade B		
LIVESTOCK	Beef	USDA Prime	USDA Choice	USDA Good	USDA Standard	

SOURCE: U.S. Government, Code of Federal Regulations, 7CFR 46-57, Washington, D. C., 1976.

Figure 4.- Grading of Butter

Butter

One way to be assured of high quality butter is to look for the USDA grade shield on the package. The grade shield (AA, A, or B) means that the butter has been tested and graded by experienced government graders. Butter graders judge quality by U.S. grade standards that set forth the requirements for each grade. They also test the keeping quality of butter,

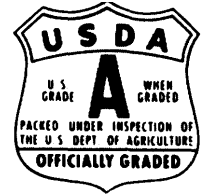


U.S. Grade AA Butter:

- has delicate sweet flavor, with a fine highly pleasing aroma;
- is made from high-quality fresh sweet cream;
- has a smooth, creamy texture with good spreadability;
- has salt completely dissolved and blended in just the right amount.

U.S. Grade A Butter

- has a pleasing flavor;
- is made from fresh cream;
- is fairly smooth in texture;
- rates close to the top grade.



U.S. Grade B Butter:

- may have a slightly acid flavor;
- generally is made from selected sour cream;
- is readily acceptable to many consumers.



SOURCE U S Department of Agriculture

for different food products in this particular divisions (See figure 5.)

Considerable diversity exists for fresh fruits and vegetables, and the extensive variety of grade nomenclature and criteria is illustrated in the Code of Federal Regulations, Title VII, Parts 46-57. Criteria for the different grades of a product are usually color, size, shape, maturity, and the number of defects; but the lower grades may be just as nutritious as the higher grades. The difference is mainly in appearance, taste, and preference.⁴

Three different conditions exist for grade nomenclature of fresh fruits and vegetables (table 3). For some fruits and vegetables, the nomenclature applies for every State in which the food commodity grows. For grapefruit and oranges, the nomenclature varies depending on the State in which the product is grown. Finally, in the case of Washington apples, a State grade applies rather than a USDA grade. The latter condition is possible because Federal grades are voluntary.

During 1976, USDA announced new uniform nomenclature for fresh fruits and vegetables. However, these changes will be implemented primarily at the request of industry. The details of this new uniform nomenclature effort by USDA are discussed in the fresh fruit and vegetable section of this report.

Processed fruits and vegetables are those frozen, canned, or otherwise preserved through processing. The nomenclature used when products are graded after processing is either a letter or an alternative name designation. Processed grades tend to be more uniform than those for fresh fruits and vegetables. Criteria for these grades are color, uniformity of size or shape, flavor, texture, maturity, and the number of defects (see figure 6).⁵ While grading criteria for processed

fruits and vegetables are based mostly on product appearance, grade designations are still diverse.

Figure 5.

Fresh Fruits and Vegetables



Although most fresh fruits and vegetables are sold at wholesale on the basis of U. S. grades, not many are marked with the grade in the grocery store.

The typical range of grades for fresh fruits and vegetables is U.S. Fancy, U.S. No. 1, and U.S. No. 2.

U.S. No. 1 means good quality and is the chief grade for most fruits and vegetables. U.S. Fancy means premium quality—only a few fruits and vegetables are packed in this grade.

The grades are based on the product's color, shape, maturity, and freedom from defects. The lower grades are just as nutritious as the higher grades. The difference is mainly in appearance, waste, and preference.

Some packaged produce is marked with the U.S. grade name. When the grade name is shown in this shield, it means the product was packed under the supervision of an official Government grader,

SOURCE U S Department of Agriculture

In the AMS Poultry Division, the difference between A and B for poultry is based on appearance, finish, and meatiness rather than tenderness.⁶ However, age of the bird, as indicated by the class, determines tenderness; and this information must, under law, be stated on labels for poultry. The grades of eggs, on the other hand, are differentiated by appearance (height) of the yolk and white portion of the cracked egg as it lies on a flat surface. p

The Livestock Division uses names rather than letter grades (see figure 7). These grades are intended to reflect differences in tender-

³USDA Pamphlet. "Official Grade Standards and Inspection for Fresh Fruits and Vegetables," December 1963, p. 3.

⁴USDA Pamphlet. "How To Use Grades in Buying Food," September 1971.

⁵USDA Pamphlet. "How To Buy Canned and Frozen Vegetables," April 1969.

⁶USDA pamphlet. "How To Buy Poultry," July 1968.

⁷USDA Pamphlet. "How To Buy Eggs," January 1968.

Table 3.
Nomenclature for Selected Federal and State Grades for Fruits and Vegetables

Product	Nomenclature for			
	Top Grade	Second Grade	Third Grade	Fourth Grade
Apples	U.S. Extra Fancy	U.S. Fancy	U.S. No. 1	U.S. Utility
Apples ¹ (Washington)	Washington Extra Fancy	Washington Fancy		
Grapefruit (Texas)	U.S. Fancy	U.S. No. 1; U.S. No. 1 Bright; and U.S. No. 1 Bronze		
Grapefruit (Arizona & California)	U.S. Fancy	U.S. No. 1	U.S. No. 2	U.S. Combination
Grapefruit (Florida)	U.S. Fancy	U.S. No. 1; U.S. No. 1 Bright; and U.S. No. 1 Golden		
Onions	U.S. No. 1	U.S. Combination	U.S. No. 2	
Oranges (Texas)	U.S. Fancy	U.S. No. 1; U.S. No. 1 Bright; and U.S. No. 1 Bronze		
Oranges (Arizona & California)	U.S. Fancy	U.S. No. 1	U.S. Combination	U.S. No. 2
Oranges (Florida)	U. S. Fancy	U.S. No. 1 Bright; U. S. No. 1; and U. S. No. 1 Golden		
Pears (Summer & Fall)	U.S. No. 1	U. S. Combination	U.S. No. 2	
Pears (Winter)	U.S. Extra No. 1	U.S. No. 1	U. S. Combination	U.S. No. 2
Tomatoes	U.S. No. 1	U.S. Combination	U.S. No. 2	U.S. No. 3

¹These are grades established by the State of Washington, not USDA.

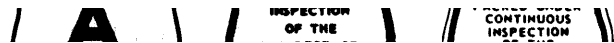
SOURCE: Compiled from data furnished by Agricultural Marketing Service, USDA.

Figure 6.

Grading of Processed Fruits and Vegetables

U.S. Grade A or Fancy	Grade A vegetables are carefully selected for color, tenderness, and freedom from blemishes. They are the most tender, succulent, and flavorful vegetables produced.
U.S. Grade B Extra Standard	Grade B vegetables are of excellent quality but not quite so well selected for color and tenderness as Grade A. They are usually slightly more mature and therefore have a slightly different taste than the more succulent vegetables in Grade A.
U.S. Grade C Standard	Grade C vegetables are not so uniform in color and flavor as vegetables in the higher grades and they are usually more mature. They are a thrifty buy when appearance is not too important—for instance, if you're using the vegetables as an ingredient in soup or souffle.
Packed under continuous in- spection of the U.S. Depart- ment of Agri- culture	This statement may be given along with the grade name or it may be shown by itself. It provides assurance of a wholesome product of at least minimum quality.

The grade names and the statement, "Packed under continuous inspection of the U. S. Department of Agriculture," may also appear within shields.



Use of the U.S. grade standards and inspection service is voluntary, and paid for by the user. But most canned and frozen vegetables are packed and priced according to their quality even though a grade is not shown on the label. Sometimes the grade name is indicated without the "U. S." in front of it—for example, "Fancy" or "Grade A." A canned or frozen vegetable with this designation must measure up to the quality stated, even though it has not been officially inspected for grade.

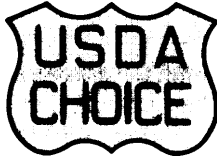
The brand name of a frozen or canned vegetable may also be an indication of quality. Producers of nationally advertised products spend considerable effort to maintain the same quality year after year. Unadvertised brands may also offer an assurance of quality, often at a slightly lower price. And many stores, particularly chain-stores, carry two or more qualities under their own name labels (private labels).

SOURCE, U. S. Department of Agriculture.

Figure 7.

Meat Grades

Main grades are Prime, Choice, and Good. There are lower grades, but you are not likely to see them marked on the meat. Some stores may have beef marked with the Standard or Commercial grades.



A mark like this may be stamped on meat. This is the grade (Choice) you are most likely to see.

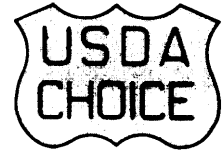
Several kinds of meat are graded—beef, lamb, veal, and calf—and this shield is used on them all.

The beef grades are a guide to how tender most cuts will be—and to how juicy and flavorful the meat will be.

Prime beef is the best and most expensive. Not many stores sell it. Most cuts graded Prime will be very tender, juicy, and flavorful.



Choice beef is high quality. Steaks and roasts of this grade will be quite tender and juicy and have a good flavor.



Good grade beef is not as juicy and flavorful as Prime or Choice, but it is fairly tender and usually has less fat than Prime or Choice.



SOURCE: U.S. Department of Agriculture.

ness, juiciness, and flavor as well as the age of the slaughtered animal. In the past, Prime and Choice have been the grades of beef most frequently available at retail, but recently leaner meat has been made available under either a house grade or USDA Good and Standard grades. In spite of this development, Choice is still well recognized by consumers and many times the only grade of meat available at the store. Though the grade designations are uniform for beef, the terminology is considerably different from other AMS divisions.

As of February 23, 1976, revised U.S. grade standards for beef became effective. These new

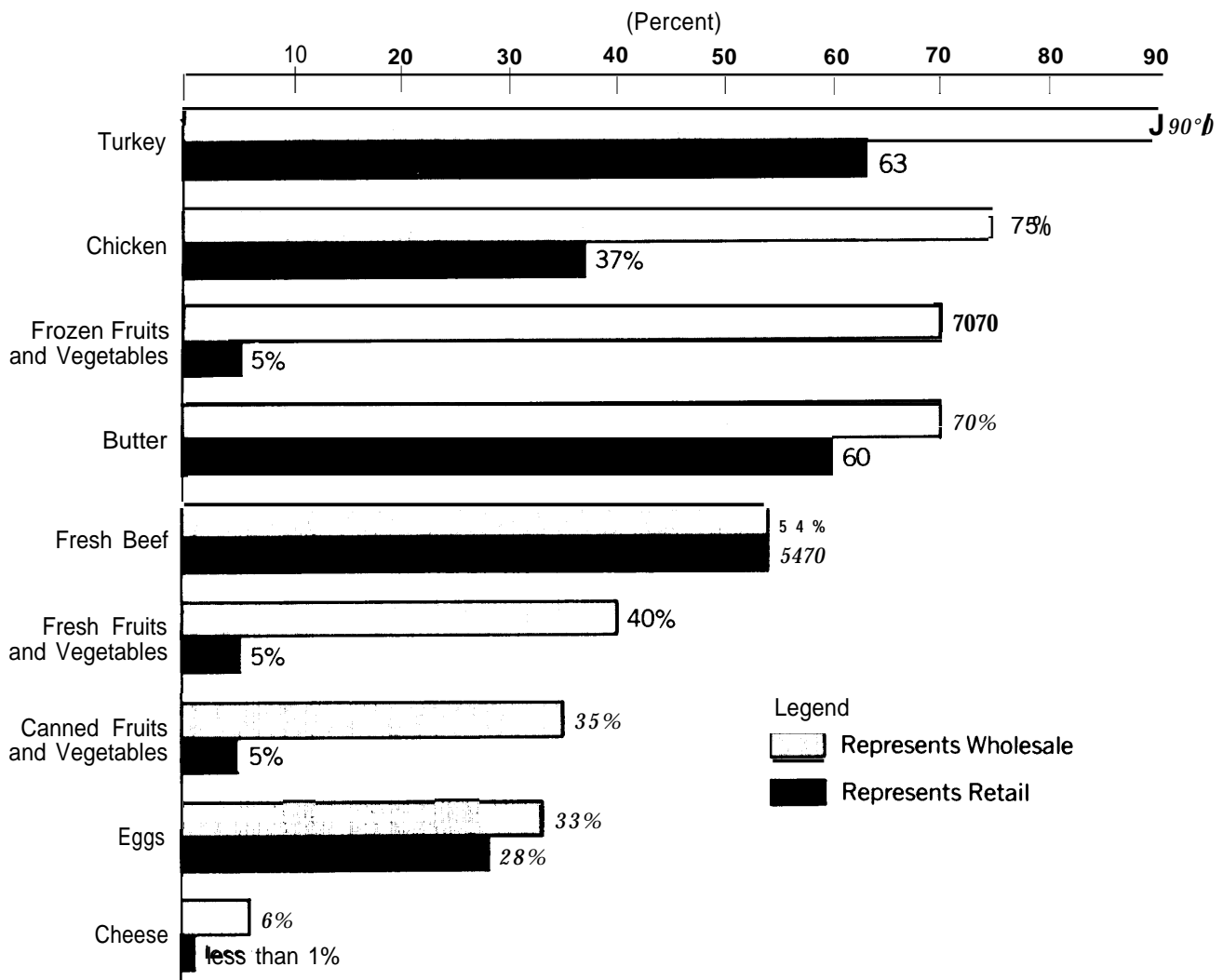
standards have four major changes: 1) all beef carcasses graded will be graded for both quality and yield; 2) conformation (shape of carcass) will no longer be a factor of the quality standard; 3) leaner beef, due to a change in the marbling (fat) -maturity (age) relationship for animals less than 30 months old, will now qualify for Prime and Choice; and 4) range of U.S. Good grade is more restrictive than before, since the marbling requirement essentially has been increased for this grade by elimination of conformation as a factor. These changes are discussed in more detail in the fresh meat section of this report.

USE OF CURRENT FOOD GRADES

Information on the proportion of food products graded by USDA at wholesale is available, but only rough estimates are available on the proportion of food products receiving wholesale grades which retain their grades at retail (figure 8). The most extensively graded food products at wholesale are fresh poultry, frozen fruits and vegetables, butter, and fresh beef. The proportion of these retaining the wholesale grade at retail varies by

commodity. For example, in fresh beef all the beef graded at wholesale retains its grade at retail. However, in frozen fruits and vegetables, 70 percent is graded at wholesale while a very negligible proportion retains the grade at retail. The only extensive use of grades at retail is in fresh turkey, butter, eggs, and fresh beef. With these few exceptions, grade symbols at retail are infrequent.

Figure 8.
Proportion of Food Products Graded at Wholesale and Retail



Source USDA Estimates