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Veal

Special-fed veal is the most popular type of veal used in upscale foodservice operations.

Development of the Special-Fed Veal Industry in the United States

Veal as we know it today has its origins in Europe. In the 1950's, U.S. dairy farmers produced large surpluses of skim milk, a low-valued by-product of butter and cheese processing, which was sold inexpensively to veal producers in the Netherlands. Like all young animals, milk is a staple of a veal calf's diet. Dutch veal producers found that feeding their veal calves a diet of skim milk, whey and fat led to increased weights and an improved quality of veal.

As veal quality improved, demand for milk-fed veal increased in Europe and subsequently spread to the U.S. Over time, the processes used for manufacturing feeds advanced, along with veal raising practices. Today, veal calves raised on a nutritionally balanced diet which includes reconstituted or liquid whey are known as "*special-fed*" veal. The final product has unique qualities that include a light pink color and subtle flavor. Special-fed veal is the most popular type of veal used in upscale foodservice operations.

To be efficient milk producers, dairy cows must give birth each year. Most female calves, or heifers, that are born are raised to give milk. Prior to the emergence of the veal raising industry in the U.S., all of the male calves, or bulls, (with the exception of a few bull calves retained for breeding purposes) were sold within a few days of birth to meat packers as "*bob-veal*", then considered yet another "low-value by-product" of the dairy industry.

Today, however, due to the consumer demand for high quality veal in the U.S., most bull calves and some heifer calves are now marketed directly to veal farmers for "*special-fed*" veal production.

Veal production in the U.S. remains closely tied to the dairy industry. Consequently, veal calves are raised primarily in major dairy production states. Most veal is raised in the rural areas of the Northeast (Pennsylvania, New York, and Vermont) and the Midwest (Ohio, Indiana, Michigan, and Wisconsin). Veal is typically raised on family-owned farms, where producers can concentrate on assuring the health and well-being of the individual calves.

However, the majority of veal is consumed distant from where it is produced. The greatest demand for high quality veal is among consumers in the metropolitan areas of the Northeast, Midwest, Southeast and West Coast. Most of today's veal consumers are adults, over 35, married with household incomes more than \$50,000.

Veal Production: A Humane and Healthy Environment

Periodically, concerns are raised in the media and other venues over the production techniques used in veal production, concentrating on issues relating to animal housing and diet. To help foodservice personnel, as well as diners, better understand these issues, this section provides an overview of veal production and the facts regarding the veal industry today.

First and foremost, veal producers have a vested interest in ensuring that their veal calves are raised in a healthy and safe environment. As with any animal production system, profitability is linked directly to the health and well-being of the animals under a producer's care. Unhealthy animals do not thrive and will not yield the quality of product in demand by today's consumer. Over the years, veal producers have proven themselves as innovators in animal care and management, which has resulted in a high-quality consumer product.

Today, the U.S. produces over 150 million pounds of veal annually.

150

Modern veal production systems ensure the health of the animal and the integrity of the veal product. Today, veal producers invest in constructing well-lit, climate-controlled and ventilated veal barns.

Veal calves are raised in specially built, individual stalls, which are designed to provide each calf room to stand up, stretch, lie down and groom itself. These individual stalls also minimize calf-to-calf contact, which is the best way to prevent the spread of disease. Further, an individual stall maximizes the quality of care that both producers and veterinarians can give the calves. For example, each calf is assured of receiving adequate amounts of food rather than having to compete with other calves in a group setting. In addition, the stalls' slotted floors allow for efficient removal of waste.

The special-fed calf's diet is carefully formulated to produce a healthy animal. Veal producers and their feed suppliers monitor each calf and take blood samples regularly to ensure that each calf receives the dietary nutrients required to promote healthy growth. Because of how veal calves are raised, each calf can receive individual, daily attention to monitor and assure its health and well-being.

It's worth noting that while the traditional methods of production referred to above still comprise the vast majority of today's special-fed veal production, veal producers have begun using newer technology to experiment with various forms of group housing.

Types of Veal in Today's Marketplace

Today, the U.S. produces over 150 million pounds of veal annually. Veal production has decreased over the last 20 years, since the size of the dairy industry (the source of the veal calves) has decreased dramatically with the increased efficiency in milk production per dairy cow. In addition, there has been greater competition for young dairy calves from beef producers who put these calves in feedlots to be marketed as fed beef.

In 2005, per capita veal consumption was .60 pounds per person including both in-home and dining-out consumption. While the per capita consumption may seem low, remember that this is a national population average and can be a little misleading for those consumers regularly consuming veal.

There are three types of veal produced in the industry today. Each type is defined by the way the calves are raised and fed, and are categorized by the color and texture of the meat.

Special-Fed Veal calves are fed a nutritionally complete milk supplement until they reach 18 to 22 weeks of age and typically weigh from 450 to 500 pounds. The meat is creamy pink in color, with a firm, fine and velvety texture. Approximately 85% of the veal consumed in the U.S. is special-fed veal. This is the veal industry's premium product.

Bob Veal calves are veal calves sold directly from the dairy farm to a meat processor for harvesting. They initially nurse from the mother cow, but are soon marketed, usually within the first three weeks following birth. At this age, calves typically weigh less than 150 pounds and the resulting veal has a light grayish-pink color and a soft texture. Veal from bob calves is often used in value added veal products, such as veal sausages and breaded veal patties. Less than 10% of total volume of all veal marketed today is bob veal.

Grain-Fed Veal calves are initially fed milk, and then receive a diet of grain, hay and nutritional formulas. The meat tends to be darker in color and has often visible fat, including marbling in muscles. Grain-fed veal calves are usually marketed at 5 to 6 months of age and weigh from 450 to 600 pounds. Grain-fed veal is usually produced in southern states, and, in some markets, may be sold as "Baby Beef".

Veal Inspection and Grading

As with all livestock harvested for meat production, veal calves and their carcasses are subject to **mandatory** inspection by the USDA for wholesomeness. Prior to harvesting, an inspector from the Food Safety and Inspection Service (FSIS) of the USDA observes the veal calves live (*antemortem* inspection) to identify any evidence of disease or injury. Should such conditions be found, the inspector may condemn the animal immediately to exclude it from the human food system, or may tag the animal as “Suspect” for later examination following harvesting.

During the harvesting process, FSIS inspectors also examine the carcass and internal organs for evidence of disease (*postmortem* inspection). If evidence is found, it may result in the condemnation of part or the entire carcass and/or internal edible organs.

In addition, FSIS inspectors randomly sample tissues from veal carcasses for testing for the presence of residues, to assure that prohibited substances have not been used in the production of the veal. Finding residues of such substances not only results in the condemnation of the carcass and its by-products, but also may lead to legal action against the producer.

Residue violations have been found in only a very small percentage of the samples taken by FSIS. To address industry and consumer concerns relative to the safety of veal as a food, the American Veal Association has established a Veal Quality Assurance (VQA) Program for special-fed veal that requires strict compliance with good husbandry practices. Historically, special-fed veal violations have been low, and the percentage of calves found to have residue violations has dropped even further since the establishment of this program.

Once a carcass has passed all elements of the USDA inspection process, it is stamped as “U.S. Inspected and Passed”, and is approved for human consumption. Following inspection, veal carcasses may be **voluntarily** graded for quality (veal is not yield graded). USDA graders from the Agricultural Marketing Service determine veal quality grades based upon the conformation (shape) and quality of the carcass. Conformation indicates the overall muscling of the carcass, and quality reflects the anticipated palatability characteristics of the veal.

When determining the quality of veal, carcasses are not ribbed as they are in beef. Rather, the grader looks at the color of the exposed lean muscles of the carcass and the indications of internal muscle quality as seen by the amount of fat streaking present in the muscles of the flank and between the rib bones.

Based on these factors, one of five quality grades is assigned to a veal carcass: U.S. Prime, U.S. Choice, U.S. Good, U.S. Standard and U.S. Utility. In 2005, over 98% of veal carcasses graded were either U.S. Prime or U.S. Choice. Foodservice operators who purchase special-fed veal can be assured of receiving veal of Prime or Choice quality, due to the product consistency that results from modern veal production practices.

In 2005, about 46% of all veal carcasses harvested under Federal inspection were graded. Veal is somewhat unique in the marketplace, since many veal consumers associate the quality of the veal they purchase with the name of its processor, rather than, necessarily, with a USDA quality grade. Therefore, much of the remaining veal is sold using “brand” names, rather than being officially graded by the USDA.

*Inspection =
Mandatory*

*Grading =
Voluntary*

Veal In Commercial Foodservice

Does veal really fit into foodservice menuing? Apparently so, based on the following:

- Veal remains much more popular among fine dining restaurants; in 2005, 71% of fine dining commercial foodservice operations served veal
- With very few exceptions, veal is used primarily as an entrée
- Most foodservice operators (74%) are serving about the same amount of veal as last year; 15% are serving more veal
- The three most popular veal cuts remain: Cutlets/Scaloppini, Osso Buco/Shank, and Veal Chop
- Fine dining operators are far more likely than casual/theme operators to add veal to the menu; 50% of fine dining non-users would be “very” or “somewhat likely” to add veal to the menu
- 77% of fine dining operators believe veal has many menu applications
- 63% of fine dining operators believe their restaurant’s image is enhanced by offering veal
- 68% of fine dining operators believe they can profitably offer veal on their menu
- 57% of fine dining operators believe veal is a popular center-of-the-plate item; 52% believe it’s on-trend and contemporary

Source: Veal Attitudes and Usage in Commercial Foodservice; Funded by America’s Beef & Veal Producers

Food Safety Practices for Veal

Veal packers take great precautions to ensure fresh veal reaches food preparers as a safe product. Improper handling and preparation are the primary causes of foodborne illness at foodservice and in homes. According to the latest data available from the Centers for Disease Control (CDC), the most commonly reported food preparation practice that contributed to foodborne illness was improper holding temperatures; the second most commonly reported practice was inadequate cooking of food. Food obtained from an unsafe source was the least commonly reported factor. Veal has an excellent track record in this area, with few to no cases of any incidents of foodborne illnesses being reported.

Veal should be stored in the coolest section of the cooler immediately upon receipt, or immediately frozen for longer term storage. When storing veal, keep these guidelines in mind:

- **Date** each package of veal in order to keep track of how long the veal has been in storage. Practice FIFO - First In, First Out.
- **Refrigerate** fresh veal at a maximum temperature of 35°F. Unopened, prepackaged fresh veal may be stored for 1 to 2 days.
- **Freeze** veal at a temperature of 0°F or below. Store frozen veal at 0°F or below in its vacuum-package, or over-wrap in moisture/vapor-proof materials such as aluminum foil, freezer paper or polyethylene film. Frozen veal cuts such as roasts, steaks or chops may be stored for up to 9 months, while frozen ground veal should not be stored for more than 3 months. However, proper frozen food management and practicing FIFO should result in veal and other meats being used well before these dates are reached.

When freezing, remember to freeze it fast. Rapid freezing creates smaller ice crystals that cause less damage to cell membranes thus preventing moisture loss during thawing. To ensure fast freezing, make sure freezers are kept at 0°F or lower (optimal freezer temperatures are -10°F to -40°F).



IMPS/NAMP 313
Veal Breast



IMPS/NAMP 1336
Veal Cutlets, Boneless



IMPS/NAMP 1332
Veal Loin Chops



IMPS/NAMP 1306
Veal Rack, Rib Chops, 7 Rib



IMPS/NAMP 1337
Veal Osso Buco, Hindshank

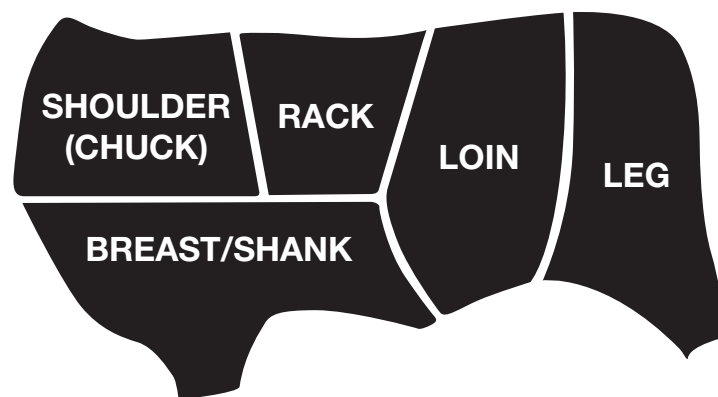


IMPS/NAMP 395
Veal for Stewing

Slow thawing prevents small ice crystals from thawing and refreezing into large crystals that cause further cell damage and moisture loss. In fact, thawing too rapidly at higher temperatures can actually undo the benefits of quick freezing.

- **Defrost** wrapped veal in the cooler at 32°F to 35°F for the best quality results and to assure food safety.
- **Vacuum-packed veal** allows foodservice operators to store fresh veal longer without freezing. This eliminates the need for defrosting and can be helpful in maintaining inventory. It is best to use vacuum-packed veal within two weeks. Once the package is opened, the veal must be treated as fresh veal and used within 1 to 2 days.
- **Leftover cooked veal** such as chops and roasts should be refrigerated immediately and can be used in stews or soups for the next day. Wrap or cover any leftover cooked veal and refrigerate within an hour after cooking.

Cuts of Veal



While veal can still be ordered as a whole carcass (or foresaddle/forequarter or hindsaddle/hindquarter) most foodservice operators order veal in some further fabricated form due to the required skill level, equipment, labor and costs associated with storing and cutting in today's foodservice kitchen.

To facilitate buying and selling veal, as well as beef, the North American Meat Processor's Association (NAMP) has developed the "*Meat Buyer's Guide*" (MBG). The MBG presents written descriptions and color photographs of primal and subprimal veal cuts, as well as portion control cuts. When purchasing veal cuts always refer to the item numbers from the *Meat Buyer's Guide* to facilitate purchases.

Cut options for ordering veal for foodservice use include:

Primal Cuts – Veal carcasses and sides are separated into four major cuts called *primals*. They are the leg, loin, rib (or rack) and shoulder (or chuck). Other than ordering carcasses (or quarters), this is the most labor intensive option.

Subprimal Cuts – Smaller, fabricated cuts, called subprimals, are cut from the four primal cuts, are often boneless or semi-boneless, and are usually further trimmed of fat.

Portion Control Cuts – *Portion control* cuts are fabricated from the primal or *subprimal* cuts to a specified weight or thickness for individual servings. This is the least labor intensive option.

Cooking Veal

The options of cookery methods are the same for veal as for other meat products, and may be either “dry cookery” (cooking without adding moisture) or “moist cookery” (using added moisture).

Dry Heat Cooking Methods

To achieve the ultimate in tenderness and taste for cuts such as roasts, rib chops, loin chops, cutlets, and ground veal, the following dry cooking methods are recommended:

- **Roasting** - Roasting is for tender cuts such as the rib rack, loin, leg and boneless shoulder roast. Before roasting, meat can be rubbed with seasoning. Sear meat to form a brown crust, if desired. To roast, place meat fat side up on a rack in an open roasting pan. Roast until 5 to 10 degrees below desired doneness. Let the roast stand 15 to 20 minutes. Temperature will rise 5 to 10 degrees to reach desired doneness and roast will be easier to carve.
- **Broiling** - In broiling, meat is exposed directly to the heat source. Broiling is best for thinner cuts, like chops, steaks and kabobs. The key to broiling is to match the rate at which the outside of the meat browns with the temperature inside of the meat. Seasoning can be added before or after broiling. Place veal in a broiler. Position thicker cuts towards the front of the broiler, where it is cooler. Turn veal and continue cooking to the desired degree of doneness.
- **Grilling** - Grilling adds rich flavor by browning the meat directly over the heat source. As in broiling, grilling also allows fat to run away from the meat, reducing the overall fat content. Veal chops, medallions, kabobs and ground veal patties are the best cuts for grilling. Position thicker cuts away from flames so that the outside is browned while the inside is cooked through. Turn veal and continue cooking to the desired degree of doneness.
- **Sautéing/Stir-Frying** - Sautéing/stir-frying is a quick-cooking method ideal for thinner veal cuts. These include cutlets, medallions, cubed steaks, ground veal or veal cut into strips.

Moist Heat Cooking Methods

Veal cuts that respond best to moist heat cooking include veal for stew and those cuts from the shoulder, leg, shank, or breast.

- **Braising** - Slowing cooking in a closed container with a small amount of water is called braising. Braising uses less water than stewing. Veal Osso Buco is usually braised. Cook until fork tender. Use the liquid from braising for a sauce.
- **Stewing** - In stewing, smaller pieces of meat are covered completely by liquid, cooked slowly in a closed container until fork tender.

Flavor Tips

There are a number of techniques for flavoring veal. The technique chosen may depend on the seasonings or ingredients used.

- **Dry Rub** - Apply herbs and spices to the outside of the meat before roasting.
- **Marinate** - Soak meat in a mixture of oils, herbs and acidic ingredients such as juices, vinegar or wine. Marinating can also tenderize meat before cooking. Veal responds well to marinades, which both tenderize and flavor the meat, and enable you to cook less tender cuts more quickly.
- **Crust or Bread** - Coat meat in herbs, ground nuts or breadcrumbs.
- **Sauce or Glaze** - Top meat with a blend of flavors while adding moisture.
- **Stuff** - Fill veal with an assortment of vegetables, herbs, nuts and cheeses.

Matching Veal Cuts to Cooking Methods

VEAL CUTS	DRY HEAT					MOIST HEAT	
	ROAST	BROIL	GRILL	SAUTE	STIR-FRY	BRAISE	STEW
Hotel Rack IMPS/NAMP 306, 306A	X						
Hotel Rack, Chop-Ready IMPS/NAMP 306B,C,D&E	X	O	O	O			
Rib Chops IMPS/NAMP 1306, 1306A,B,C,D&E	X	X	X	X			
Rack, Ribeye, Boneless IMPS/NAMP 307	X	O	O	O			
Chuck, Bone-In IMPS/NAMP 308, 309						X	X
Shoulder Arm or Blade Chops* IMPS/NAMP 1309, 1309A		X	X				
Chuck, Boneless IMPS/NAMP 309D&G, 310, 310A,B&C, 311						X	X
Foreshank/Osso Buco IMPS/NAMP 312, 1312						X	X
Breast IMPS/NAMP 313, 314						X	X
Short Ribs IMPS/NAMP 323						X	X
Loins IMPS/NAMP 331, 332	X						
Loin, Strip Loin, Boneless IMPS/NAMP 344, 344A	X	O	O	O			
Loin, Short Tenderloin IMPS/NAMP 347	X	X	X	O	O		
Loin Chops IMPS/NAMP 1332	X	X	X	X			
Leg, Bone-In IMPS/NAMP 334	X						
Leg, Boneless IMPS/NAMP 335, 336	X		O	O	O		
Hindshank/Osso Buco IMPS/NAMP 337, 1337						X	X
Leg, Butt Tenderloin IMPS/NAMP 346, 346A	X	X	X	O	O		
Leg, Top Round IMPS/NAMP 349, 349A	X					X	X
Leg, Sirloin, Cap Off, Tri-Tip On IMPS/NAMP 352	X	O	O	O	O		X
Leg, Boneless, 3 or 4 Parts IMPS/NAMP 363, 363A&B	X		O	O	O		
Cutlets IMPS/NAMP 1336, 1349A			O	X	X		
Veal for Stewing/Kabobs IMPS/NAMP 395, 395A		X	X			X	X
Ground Veal IMPS/NAMP 396	X	X	X	X	X		
Veal Cubed Steak IMPS/NAMP 1300, 1301				X			

X = HIGHLY RECOMMEND

O = OCCASIONALLY USED

* = MARINATE OR TENDERIZE

Matching Veal Cuts to Classic Veal Dishes

VEAL CUTS	STEWES Blanquette, Goulash, Curry, Marengo	CUTLETS Weiner, Schmitzel, Scaloppini, Cordon Bleu, Marsala, Picatta Saltimbocca, Milanese Oscar, Orloff Parmesan	CHOPS Grilled, F-Bone, Stuffed	ROASTS Seasoned	ROASTS Rolled and/or Stuffed	SHANKS Osso Buco	KABOBS
Hotel Rack IMPS/NAMP 306, 306A				X			
Hotel Rack, Chop-Ready IMPS/NAMP 306B,C,D&E			O	X			
Rib Chops IMPS/NAMP 1306,1306A,B,C,D&E			X				
Rack, Ribeye, Boneless IMPS/NAMP 307		O	O	X	X		
Chuck, Bone-In IMPS/NAMP 308, 309	X						O
Shoulder Arm or Blade Chops* IMPS/NAMP 1309, 1309A	O						
Chuck, Boneless IMPS/NAMP 309D&G, 310, 310A,B&C, 311	X			X	X		O
Foreshank/Osso Buco IMPS/NAMP 312, 1312	O					X	
Breast IMPS/NAMP 313, 314	O				X		
Short Ribs IMPS/NAMP 323	O						
Loins IMPS/NAMP 331, 332				X			
Loin, Strip Loin, Boneless IMPS/NAMP 344, 344A		O	O	X	X		O
Loin, Short Tenderloin IMPS/NAMP 347		X		X	X		
Loin Chops IMPS/NAMP 1332			X				
Leg, Bone-In IMPS/NAMP 334				X			
Leg, Boneless IMPS/NAMP 335, 336	O	X		X	X		O
Hindshank/Osso Buco IMPS/NAMP 337, 1337						X	
Leg, Butt Tenderloin IMPS/NAMP 346, 346A		O		X	X		O
Leg, Top Round IMPS/NAMP 349, 349A	O	O		X	X		O
Leg, Sirloin, Cap Off, Tri-Tip On IMPS/NAMP 352	O	O		O	O		O
Leg, Boneless, 3 or 4 Parts IMPS/NAMP 363, 363A&B	O	O		X	X		O
Cutlets IMPS/NAMP 1336, 1349A		X					
Veal for Stewing/Kabobs IMPS/NAMP 395, 395A	X						X
Veal Cubed Steak IMPS/NAMP 1300, 1301		X					

X = HIGHLY RECOMMEND

O = OCCASIONALLY USED

* = MARINATE OR TENDERIZE

The nutritional profile of veal compares favorably with poultry, fish, seafood, and lean cuts of beef, pork and lamb.

Nutrition and Veal

More diners are becoming aware of the relationship between a well-balanced diet and good health. They want to eat smart, without sacrificing the pleasure of eating well.

Diners are demanding satisfying, nutritional menu choices, which can be easily fulfilled with lean meats, including veal. As part of a well-balanced diet, veal fits within the Dietary Guidelines recommended by the Department of Health and Human Services (HHS), the Department of Agriculture (USDA), the American Heart Association and the American Dietetic Association.

Veal is an excellent, nutritious choice when featured center-of-the-plate, or when used to enhance the nutritional profile and taste of menu items such as salads, soups and pasta dishes. The nutritional profile of veal compares favorably with poultry, fish, seafood, and lean cuts of beef, pork and lamb. The following chart profiles the nutritional content for a 3-ounce cooked, trimmed serving of veal.

Veal Cut	Calories	Protein (g)	Chol (mg)	Total Fat (g)	Sat (g)	Mono (g)	Poly (g)
Veal Short Ribs	151	22	98	6	2	2	1
Veal Shank Roast	151	27	107	4	1	1	0
Veal Rib Chop	185	29	122	7	2	2	1
Veal Loin Roast	185	21	88	10	4	4	1
Veal Top Round Steak (Leg)	173	31	115	4	2	2	0
Veal Loin Chop	192	29	106	8	2	3	1
Veal Breast	185	26	99	8	3	4	1
Ground Veal (8% fat)	146	21	88	6	3	2	0

Enhancing Profit Opportunities with Veal

Veal is an item that frequently appears on upscale menus, but many foodservice operators may be surprised to find that they really can afford to offer veal, for the following reasons:

- Veal's upscale image commands a higher price point.
- Veal's smaller portion size delivers more profit per order than other meat dishes.
- Foodservice operators can further enhance their profits by using less expensive cuts of veal from the shoulder chuck or breast.
- Veal processors are continually increasing purchase options designed to enhance user profitability. For instance, processors are further fabricating cuts to reduce labor costs in the preparation area. Some of the products now available from many packers are breaded veal steaks, meatballs, seasoned shoulder roasts, pre-cooked Osso Buco in sauce, veal steaks for sandwiches and veal sausages. These time and labor saving products make it easier to add veal to the menu.