

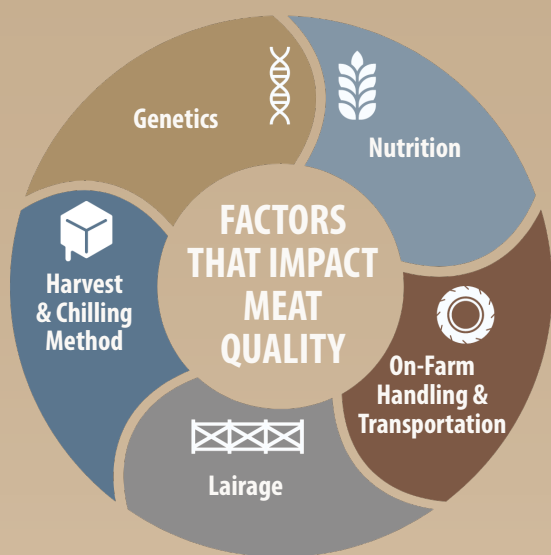


MEAT & POULTRY PROCESSING CAPACITY TECHNICAL ASSISTANCE

MEAT QUALITY FACTORS *Animal to Food*

What is meat quality?

Meat quality is the degree to which a consumer finds a meat product attractive, useful, and safe. It is made up of many factors, but it is mostly defined by a consumer's preference or acceptance of the product. Therefore, appearance accounts for an important part of quality when evaluating meat. Meat products are evaluated visually by evaluating the color, texture, and composition including marbling, outside fat, and bone before deciding if their personal standards are met.



COLOR & GRADE

The color of meat plays an important role in consumer decision-making about purchasing. Consumers will typically prefer bright red beef and bison, bright pink pork, and dark red lamb and goat. Color is affected by many factors including animal differences, with younger animals having "brighter" color, cut of meat, and packaging.

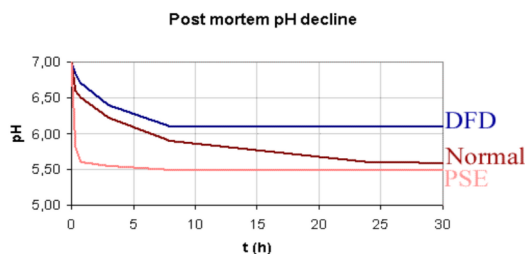
PH & TENDERNESS

The pH of meat is highly related to color. The typical pH of meat is around 5.5. Meat that has a lower than normal pH tends to be "pale" in color and has a "loose" texture. With a higher than normal pH, meat tends to be "darker" with a firm texture. Both high and low pH meat is not preferred by consumers. Retail packaged meat will usually have a bright color, and vacuum-packaged meat will have dark or purplish color.

Converting muscle to meat

The composition of the meat, especially the flecks of fat within the muscle called marbling, is important to quality. Higher levels of marbling are strongly related to great eating satisfaction and higher value for beef, pork, and lamb. In fact, marbling is the most important factor in the quality grading of beef carcasses. Consumers typically rate tenderness as the most important quality attribute of meat followed by flavor then juiciness. Tenderness, juiciness, and flavor are collectively referred to as *taste*. There are many things that affect taste with the most important being animal age at slaughter with younger animals being more tender, amount of time the meat spent aging (stored unfrozen), amount of marbling, and how it was prepared.

RELATIONSHIP BETWEEN RATE OF POSTMORTEM PH DECLINE & MEAT QUALITY



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MEAT & POULTRY PROCESSING CAPACITY TECHNICAL ASSISTANCE INTRO TO USDA GRANT WRITING

Understand the grant then ask, “Is this a good fit?”

Grant writing can seem like a daunting task, but it’s actually not that hard! The most important thing is to read and re-read the grant before you begin to write— take notes, highlight sections, and ask yourself questions about what you read.

The three most important parts of the grant are the executive summary, eligibility requirements, and the real funding opportunity. Once you are confident that you understand those three things, go ahead and re-read one last time before asking yourself if this is a suitable fit for your organization.

STEP ONE | Understand The Meat & Poultry Business

The meat & poultry industry is one of the most dynamic and complex in the global economy. Understanding the realities of this market involves considering factors such as animal sourcing, processing/packaging value-added products, byproduct utilization, etc.

STEP TWO | Understand Your Business

Taking an idea to a plan of action requires knowing the ins and out of your business. With your project outline and business goals in mind, start by understanding the work you will need to do to bring your product to market.

- Is there a market for your product?
- How much funding will your business require?
- Will you be able to source animals locally or must they be transported?

STEP THREE | Understand The USDA Grant Process

Learn more by visiting www.grants.gov. Register for a Unique Entity Identifier issued via www.SAM.gov, the System Award Management (SAM). Fill out the SF 424 form, a cover sheet for submission of pre-applications and applications. Begin the process of soliciting letters of commitment or support. Set your deadline at least one week before the official deadline. Be ready for fund verification, online applications, and hidden bummer factors.

EXECUTIVE SUMMARY

General Purpose
Funding Parameters
Geography
Business Model
Ownership

ELIGIBILITY

Business Structure
Ownership
Requirements
Use of Funds

THE REAL FUNDING OPPORTUNITY

Min. & Max. Funding
Advance
Reimbursement
Matching
Cash, In-kind
Indirect Cost Allowance



Know how to score

TOPIC	SCORE
Financial Viability, Technical Feasibility & Readiness	UP TO 40 POINTS
Market Impact & Opportunities	UP TO 20 POINTS
Community Impact	UP TO 15 POINTS
LABOR, WORKFORCE, PERSONNEL	
Key Personnel	UP TO 5 POINTS
Construction Labor	UP TO 10 POINTS
Operational Workforce	UP TO 10 POINTS
Administrator's Discretionary Points	UP TO 10 POINTS





MEAT & POULTRY PROCESSING CAPACITY TECHNICAL ASSISTANCE INTRO TO USDA GRANT WRITING

Steps to writing a grant proposal

STEP ONE | Write For The Reviewers

Reviewers will be scoring based on the criteria listed in the *Know how to score* section of the previous page. Follow the scoring sequence as well as guidelines while writing to the extent possible.

STEP TWO | Clarify The Purpose & Strategy

Be clear in the purpose and strategy by writing with the following questions in mind.

- What will be learned as a result of the proposed project that is not known now? This answer will clarify goals, aims, and outcomes.
- Why is it worth knowing? This answer will clarify the significance of the proposal.

STEP THREE | Budget Projections

Provide accurate, realistic, and understandable budget projections and justifications.

STEP FOUR | Identify People, Money & Other Resources

Remember to recognize inflationary impact.

STEP FIVE | Identify Partners In The Project

Partners assist in providing letters of commitment, support, or verification.

STEP SIX | Identify A Clear Process To Evaluate The Success

The process should be definitive, measurable, and tied to budget projections. Ask, "How will final conclusions be deemed as valid?" This answer will clarify the criteria for success. Use short, concise sentences that only contain one purpose in this section. For instance, if a sentence becomes longer than twenty words, look for a place to insert a period. Obtaining a copy of the book *Elements of Style* by Strunk and White may be useful to writing in this style.

STEP SEVEN | Have Your Proposal Reviewed & Thoroughly Proofread

Use tools like Grammarly and Spellcheck, then reach out to fellow community members to review and proofread the proposal.





MEAT & POULTRY PROCESSING CAPACITY TECHNICAL ASSISTANCE

BEEF CARCASS VALUE & CUTTING

The origin of beef value

The beef value chain starts with live animals and ends with cuts of beef on retail shelves. The process is called *yield* and is measured in a percentage, which is a ratio of the live animal weight to the carcass weight. The higher the yield, the more meat you get. A typical steer has an 18-20% dressing percentage, which is the live animal weight divided by the dressed carcass weight. The dressing percentage varies depending on breed, sex, and age.

CARCASS QUALITY GRADING

RELATIONSHIP BETWEEN MARBLING, MATURITY, AND CARCASS QUALITY GRADE ¹					
DEGREES OF MARBLING	MATURITY ²				
	A ³	B	C	D	E
Abundant	PRIME				
Moderately Abundant					
Slightly Abundant	CHOICE			COMMERCIAL	
Moderate					
Modest	SELECT			UTILITY	
Small					
Slight	STANDARD				
Traces					
Practically Devoid				CUTTER	

USDA Grading

The USDA's beef grading system was designed to help consumers know what they are buying. The Yield Grade (YG) is based on the quantity of meat that can be extracted from each carcass. The higher the Yield Grade, the more meat you get out of each animal. The Quality Grade (QG) is based on how tender or tasty the meat is. The higher the QG, the more tender or tasty it will be. It's important to note that these two categories are uncoupled: you can assign one or two grades to any carcass, but not both.

USDA Quality Grades

Beef value is based on two factors: the physiological maturity of the animal and its skeletal ossification. The age of an animal is determined by looking at its dentition (the number of teeth it has), and that information is used in conjunction with other indicators, like lean color, to determine the maturity of an animal.

GRADING VERSUS INSPECTION

Grading is voluntary and a "for-fee" service provided by the Agricultural Marketing Service of USDA

Inspection is mandatory and paid for by tax dollars

Marbling is another important indicator of beef value. When you look at a steak, you want to see marbling, which means fat distributed throughout the meat. This makes for a tender, juicy cut of steak when cooked properly. The amount of intramuscular fat can also be determined by looking at an animal's skeletal structure—the more bones it has, the better!





MEAT & POULTRY PROCESSING CAPACITY TECHNICAL ASSISTANCE

BEEF CARCASS VALUE & CUTTING

Cutting

Cutting Styles

There are several different cutting styles possible when it comes to beef production. Most suprimals in the US are boneless, except short loin, which is the source of T-bone steaks. Trimmings, small bits of meat and fat, are collected for ground beef production.

Beef Carcass Cut Fabrication

A primal cut is a piece of meat that comes from the center of an animal. It's called a primal because it's one of the first cuts made when breaking down an animal for sale at the retail level.

There are a few different types of primals, including chuck, rib, loin, round, flank, plate, brisket, and foreshank. Each primal has its own subprimals defined by the USDA Institutional Meat Purchasing Specifications (IMPS), and each subprimal can be broken down even further into retail cuts.

The IMPS specifications are found in "Meat Buyers Guide," which is available to anyone who works in the meat industry.

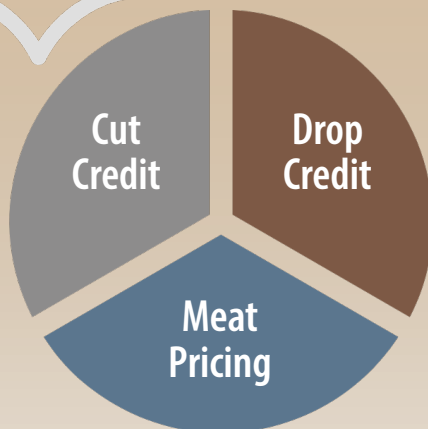
Four rules of beef cut fabrication

1. Cut thick from thin
 - The large primals, for example the rib are removed from the thin primals, for example the plate
2. Cut tough from tender
 - Loin from Round
3. Cut more valuable from less valuable
 - Chuck from Rib
4. Cut retail cuts against the grain of the meat

Steps in Processing



Where
value is
added



Helpful Information



Watch the video "Beef Retail Fabrication" from UK College of Agriculture, Food and Environment, or @UKYAgiculture on Youtube. Dr. Gregg Rentfrow fabricates a side of beef into wholesale cuts. Shows Flatiron Steak, the Chuck Eye Steak, the American Roast, and the Denver Cut Steak.

Use the link below to find the video.
<https://youtu.be/-PBGvoEFE74>

