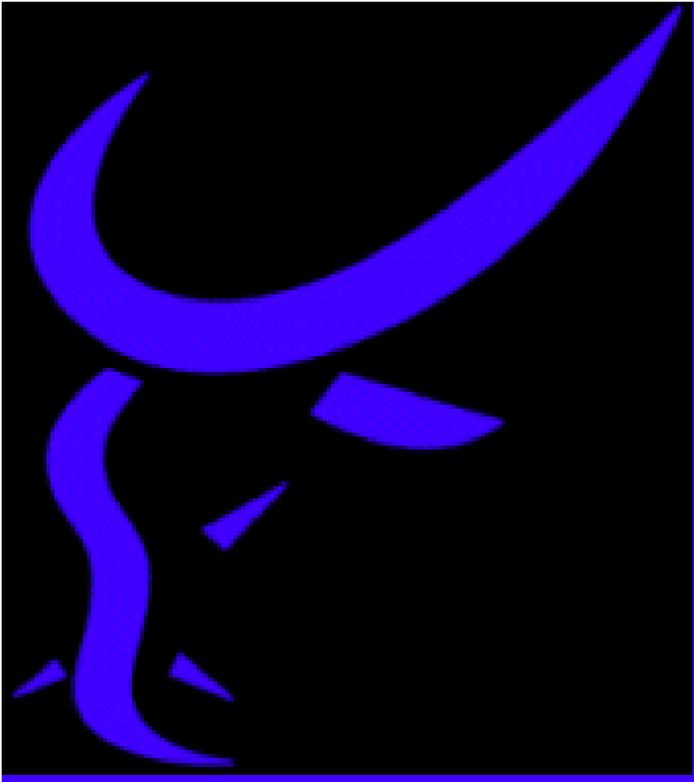




BEEF Basics . . .

**All you really need
to know about beef !**



Joe Mancini

Emily Prior

Thanks to Quantum Foods, Bolingbrook, IL



Agenda

Introduction

Inspection versus Grading

Why is that beef tough ? Or tender?

Where on the cow does that come from?

How do we cook it, and why does that matter?

Let's Talk Ground Beef !

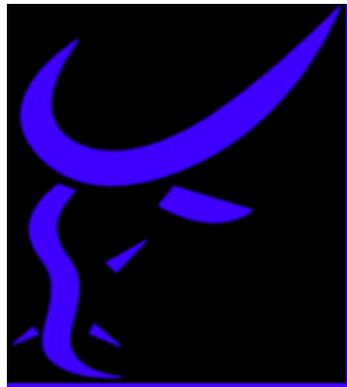
Nutritional Impacts – Good news!

Handling Beef

Cooking it right !

How does beef meet the services' menu requirements?

New menu ideas



Meat Inspection and Grading What's the Difference?



For meat inspection – think wholesomeness

Meat is from healthy animals

Processed under sanitary conditions

Is safe to eat

Paid for
by taxes

For grading – think quality

US Department of Agriculture inspectors

Standards established by USDA

Based on age of animal and amount of marbling

Voluntary –
Paid for
by meat
processors



GRADING CATTLE

-Quality and Yield Grade

- PRIME (3 % of all cattle)**
- Top Choice (CAB never higher than this)**
- Low Choice**
- Select**
- Standard**
- Dark Cutter**

-Note: If a cow is black-hided, assume they have some Angus.

-Only place to get black hides is from Angus. To be certified as CAB, cow must be at least 50% Angus with no dairy breeding



BEEF GRADING

QUALITY GRADE	Steers/Heifers	Cows	Bullocks	Bulls
U.S. Prime	●		●	
U.S. Choice	●	●	●	
U.S. Select	●	●	●	
U.S. Standard	●	●	●	
U.S. Commercial	●	●		
U.S. Utility	●	●	●	
U.S. Cutter	●	●		
U.S. Canner	●	●		

Test question: What is a heifer?



Cutability (Yield Grade)

YG 1 - leanest

YG 2A (2.0 – 2.5)

YG 2B (2.6 – 2.9)

YG 3A (3.0 – 3.5)

YG 3B (3.6 – 3.9)

YG 4

YG 5 - fattest



Yield Grading

Fat thickness (average 3 = .1 – 1.5 inches)
Carcass weight
Ribeye area
Average KPH fat as a percent of carcass weight
(average 2.0%)
Dressing percent: National average .635 X
weight in pounds

NOT MARBLING !!

QUALITY

- Fat thickness
- Maturity
- Days on Feed
- Breed Type



More than its hide holds that cow together!

Connective tissue

What does it do?

Holds together bundles of muscle cells

Connects to bones

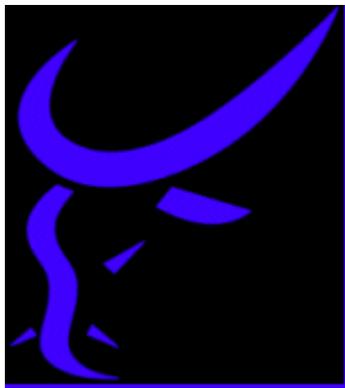
Organizes muscle cell responses (permitting work to be done by the animal)

How much is present in each muscle?

What job is done by the muscle

How much work did that muscle do during the animal's life

The genetic heritage of the animal



Connective Tissues

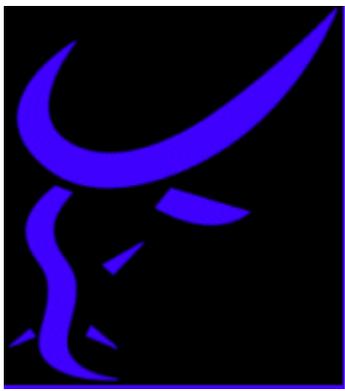
White or pale yellow

Made up of two proteins

- Elastin – elastic, chewy, hard to soften
- Collagen – softens into gelatin when cooked in the presence of moisture



SO WHAT? WHO CARES?

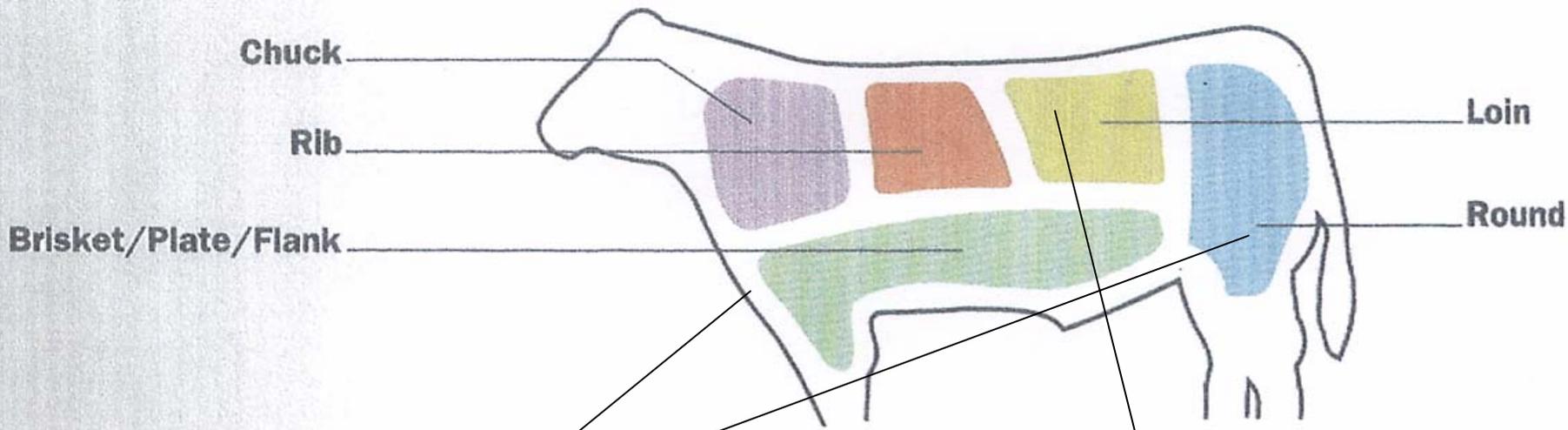


TENDERIZATION METHODS



Four approaches:

- 1. Cut those muscle fibers! (Chop, grind, cube)**
- 2. Mechanically manipulate muscle fibers – Pound, Jaccard, tumble it.**
- 3. Use enzymatic tenderizers. Inject or marinate the meat with natural compounds that break down proteins into component amino acids.**
- 4. Use functional tenderizers. Compounds which act to hold moisture at the cellular level to soften the collagen during cooking.**



Where on the cow does that cut come from?

Does that affect how I should cook it?

**Frequent Movement –
Going to be tougher!**

**Just hanging
Around – more
tender!**

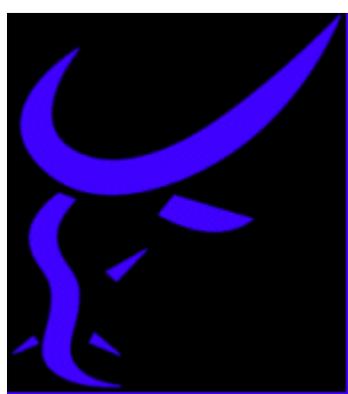


COOKING IT RIGHT

Use moisture for less tender cuts – cook longer

Grill, broil or roast for more tender cuts

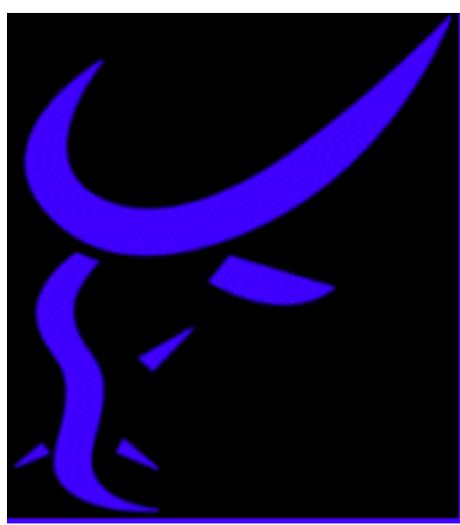
Use marinades on leaner meat to add flavor and moisture



**A happy marriage - - choose
the right cut and cook it right!**



Check out this handout!



**How many recipes are there in the
Armed Forces Recipe Service for
PDBT ? (And what the heck IS
PDBT?)**

Let's talk Ground Beef!

USDA Ingredient Standard List and Labeling Requirements for Ground Beef Products

CATEGORY	INGREDIENTS									
	Skeletal Muscle	Skeletal Trimmings	Head Meat	Cheek Meat Limited to 25%	Added Beef Fat	PDCB*	PDBT**	Beef Hearts	Water, Binders, Extenders & Fillers	Organic Meats
Ground Chuck, Ground Round or Chopped Sirloin	⊘	⊘								
Ground Beef (also 100% Pure or Pure Ground Beef)	⊘	⊘	⊘	✓						
Hamburger	⊘	⊘	⊘	✓	⊘					
Pure Beef Patties (also 100% pure Beef)	⊘	⊘	⊘	✓		⊘				
Pure Beef Patty Mix	⊘	⊘	⊘	✓		✓				
Beef Patties	⊘	⊘	⊘	✓	⊘	⊘	✓	✓	✓	✓
Beef Patty Mix	⊘	⊘	⊘	✓	⊘	✓	✓	✓	✓	✓

These ingredients
 Are not allowed in
 These product
 categories

*PDCB – Partially Defatted Chopped Beef

** Partially Defatted Beef Fatty Tissue



Ingredients allowed in these products which are NOT REQUIRED to be listed on the label



Ingredients allowed in these Products that MUST be Listed on the label

FAT CONTENT OF GROUND BEEF

% Fat Raw

% Fat Cooked

25

22

22

18

18

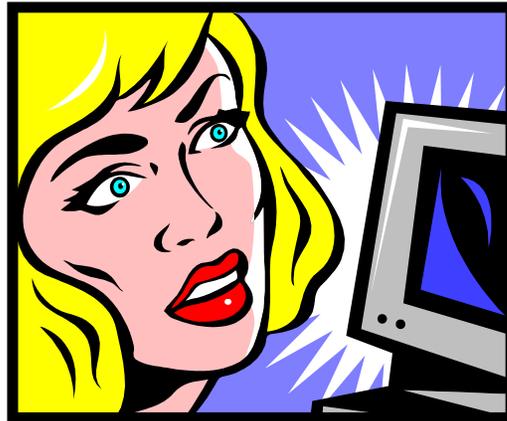
16

15

15

10

12

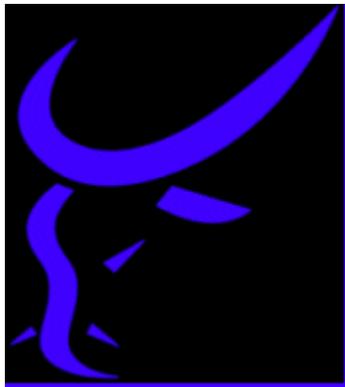


Why does this happen ?????

Leaner Beef Cattle



Average roast has 30% less fat than just 10 years ago !



Nutritional Advantages

What do you have to eat to match a
Three ounce serving of beef ?



Zinc = **12 3.5 ounce cans of tuna OR
7 6 ounce cans of tuna**



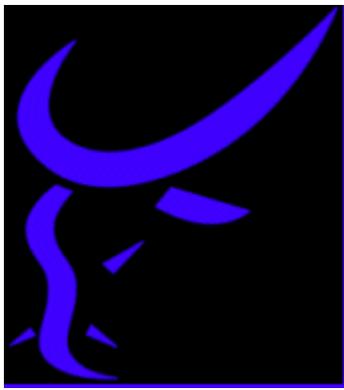
Iron = **3 cups of spinach**

Riboflavin = **2 1/3 chicken breasts**

Thiamin = **2 chicken breasts**

B12 = **7 chicken breasts**





News Flash !

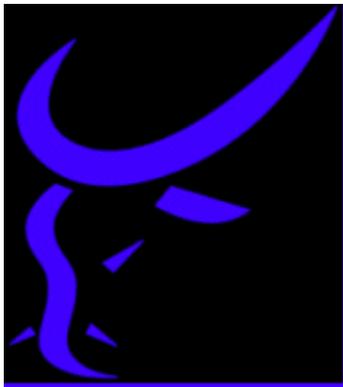


-Study conducted by:

- Chicago Center for Clinical Research
- John Hopkins University Lipid Clinic
- University of Minnesota

- Findings, June 1999

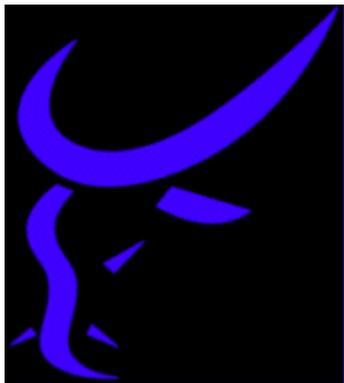
-You can consume 6 ounces of lean red meat five to seven days a week as part of a heart-healthy diet and **still lower cholesterol levels**



News Flash !



- Choose leaner cuts / trim fat before cooking
- Cook it right – roast, broil, grill
- Government consumption surveys indicate just 52% of men and 25% of women eat recommended meat group levels daily



ENJOYING TODAY'S LEAN BEEF . . .

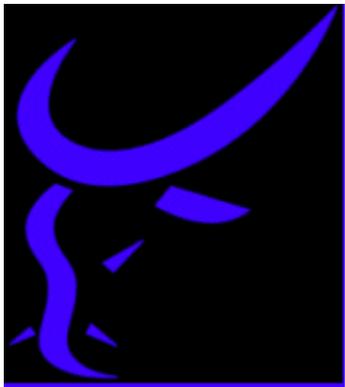
Did you know there are seven cuts
Of beef which contain less total
Fat than a chicken thigh?

3 oz skinless or trimmed, cooked portion

Chicken Thigh	9.3 g total fat
Tenderloin/filet	8.5 g total fat
Top loin/NY Strip	8.0 g total fat
Bottom Round	6.3 g total fat
Top Sirloin	6.3 g total fat
Round Tip	5.9 g total fat
Top Round	5.5 g total fat
Eye Round	4.2 g total fat
Chicken Breast	3.0 g total fat



KEEP IT CLEAN..
KEEP IT COLD ..
COOK IT PROPERLY !



Keep it **CLEAN** !

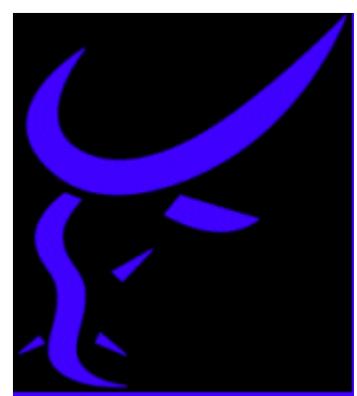
Wash your hands – hot soapy water, 20 seconds+ *

Don't cross- contaminate –

keep raw meat away from other foods

sanitize cutting boards/knives before using on other foods

* How do you **KNOW** 20 seconds have passed?



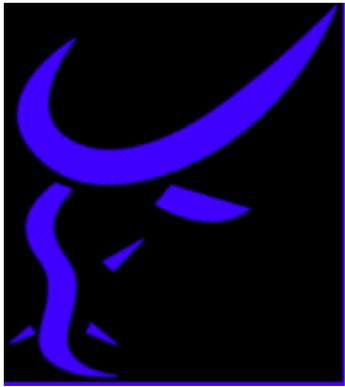
Keep it **COLD** !

Store properly wrapped beef in coldest part of refrigerator

Temper meat under refrigeration

Store leftovers immediately in shallow, covered containers

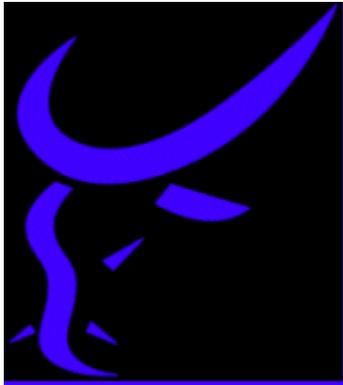
**Keep refrigerator at 35 degrees F and freezer at 0 degrees F
or below**



Keep it COLD !

Storage Chart

Type of Beef	Refrigerator (35 F to 40 F)	Freezer (0 F or colder)
Steaks and roasts	3 to 4 days	6 to 12 months
Ground Beef	1 to 2 days	3 to 4 months
Cooked Beef (leftovers)	3 to 4 days	2 to 3 months



Cook it Properly !



Use instant read thermometer to verify cooking temperatures

Eliminate bacteria by cooking food properly

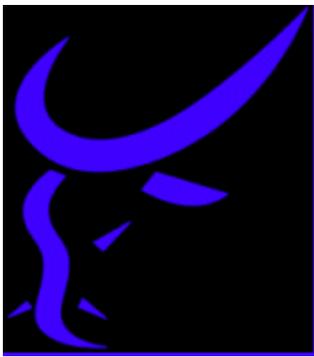
Ground Beef – 160 degrees F internal
Steaks and Roasts:

145 degrees F - medium rare

160 degrees F – medium

170 degrees F – well done

Reheat leftovers to minimum of 165 degrees F



Don't do it !

- **Press down on hamburgers with spatulas while cooking – affects juiciness !**
- **Stick the steaks – that is, use tongs, not forks or knives when turning steaks**
- **Cook steaks you're going to put in the steam table for holding past medium rare / medium – they continue to cook on the line !**

How does beef meet the Services' needs?



The Army:

A Ration: Minimum of two entrees; three desirable

Short order: hamburgers, cheeseburgers

Deli Bar – Must include Roast Beef

Mandates 85% lean ground beef; no fillers or extenders

How does beef meet the services' needs?



The Air Force:

Mandates use of 85% lean ground beef

Cream ground beef – every night meal and breakfast

Roast Beef for sandwiches

Hamburgers and cheeseburgers for short order every day

Other items: Meat balls for Cannonball Sandwich; salisbury steak;

Yakisoba, beef and spaghetti; steak & cheese subs; BBQ beef

Cubes; paprika beef; beef porcupines; country style steak; pepper

Steak; beef and corn pie; Yankee pot roast; Swedish meatballs;

Hungarian Goulash; Strip loin steak; stir fry beef; pot roast;

Beef cannelloni; chili mac; sloppy BBQ beef; meat loaf; beef ball

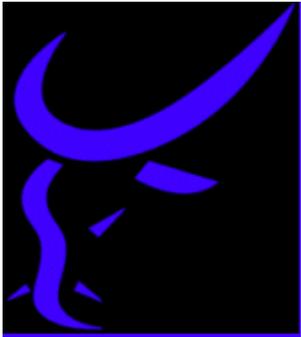
Stroganoff; Italian Pepper Beef sandwich; Swiss steak; spaghetti

With meat sauce; lasagna; ribeye steak; Cajun meatloaf; Sauerbraten

Navy Requirements

Packaging for ships is important !

**Using more pre-prepared items to reduce labor –
Calls them “Advanced Foods”**



Menu Ideas

Use one cut in multiple ways !

Stretch it with starches, veggies and eggs.

Think seasonal – match the method to the weather.



One cut – three times a day!

Breakfast

Lunch

Dinner

Ribeye Steak & eggs

Ribeye on Kaiser Roll au jus

Grilled Ribeye

Steak Omelet
w/cheese

Wrap with steak strips,
onions, and peppers

Steak Fajitas
with onions,
green peppers and
mushrooms

Steak & Egg Biscuit

Steak & Cheese Sub

Country style steak

Creamed Ground Beef

Chili Con Carne

Salisbury Steak



Planning your menus – think beef !

QUANTUM FOODS



GREAT STEAKS![®]

**Why Quantum Foods ? Aren't
all beef packers the same?**

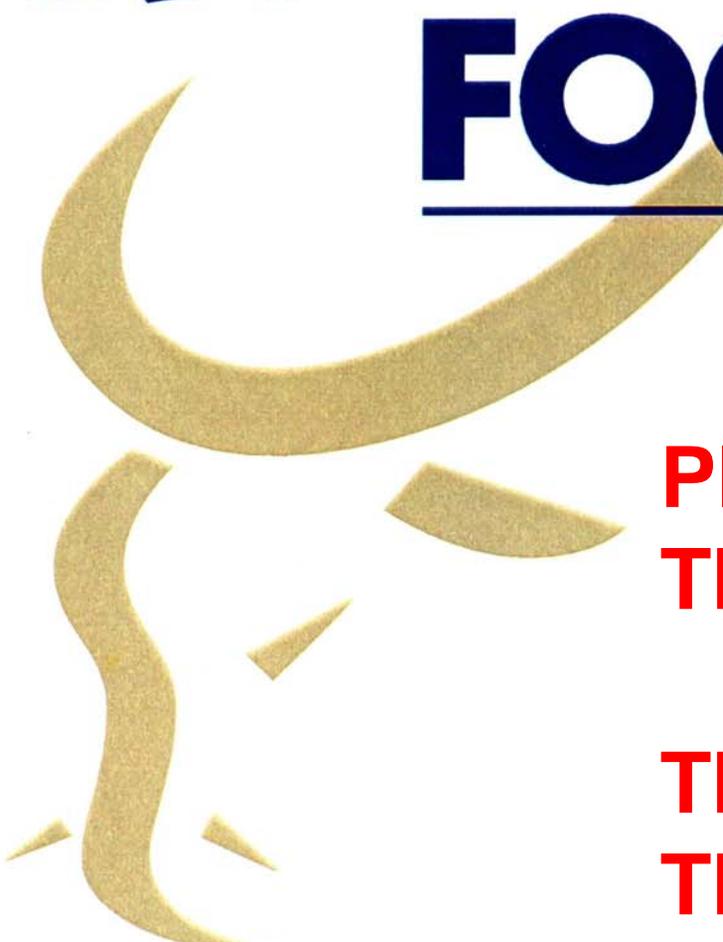
**Facility security – from access to cameras; ID
cards and biometric fingerprints**

**Quality Assurance – Staff on the floor at
all times with hand-held computers
performing analyses**

Ability to respond to surge requirements

Mentoring small, minority owned business

QUANTUM FOODS



GREAT STEAKS![®]

**Planning your menu ?
Think Beef !**

**Thinking Beef?
Think Quantum Foods !**

Quantum Foods has an exceptional NAPA program and fully supports the training programs of DSCP and the Services. Let us support you!

QUANTUM FOODS



GREAT STEAKS![®]

VALUE ADDED SERVICES

- SOP's for all products catalogued
- Point of Sale Materials for all products Catalogued
- Menu ideas
- Full support of the Quantum team



**Need to shed a little
light on your food
program?**

**Call Joe Mancini at Quantum
Foods/Quantum Culinary**

1-800-334-6328

Cell: 1-630-514-7956

Fax: 1-630-679-2405

Quantum – your partner for the best proteins at the best price.