

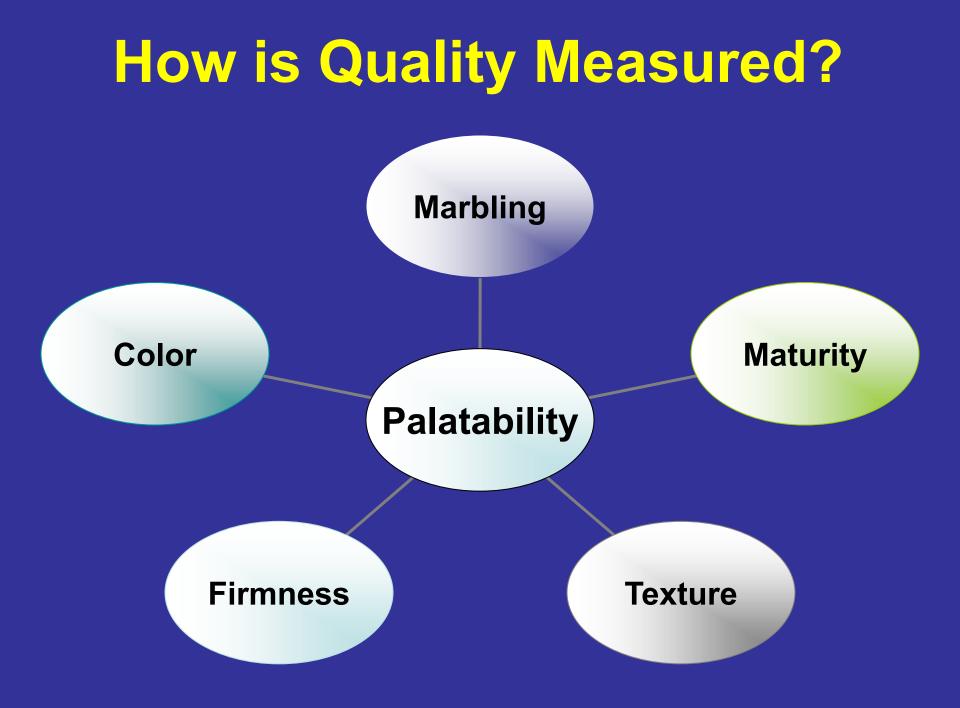
## Quality and Yield Grade: What's It Supposed To Mean?





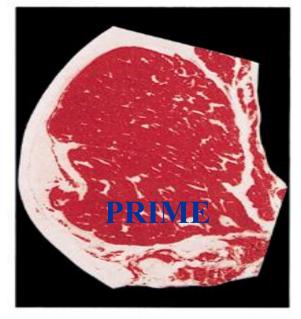


#### SEBBA The University of Georgia Alexander Stelzleni

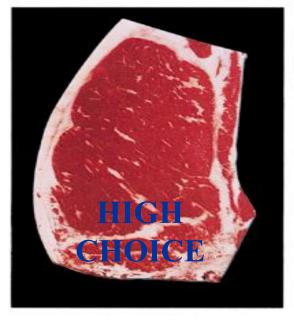




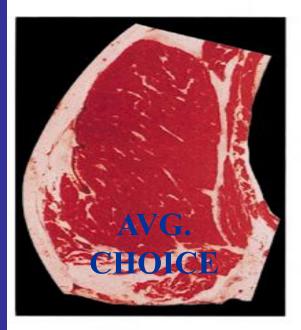
**Moderately Abundant** 

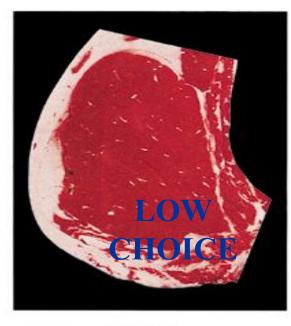


Slightly Abundant



Moderate





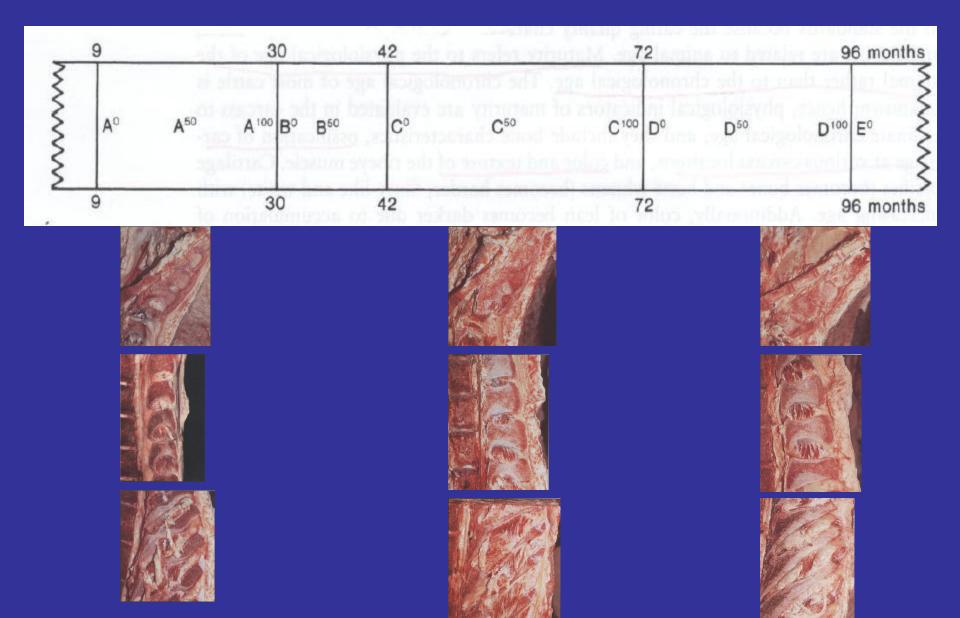


Modest

Small

Slight

# Maturity and Chronological Age



### **Beef Quality Grading**

REL	ATIONSHIP BETWEE	N MARBLING,		ARCASS QUALITY GR	ADE			
DEGREES OF	MATURITY <sup>2</sup>							
MARBLING	A <sup>3</sup>	В	С	D	E			
Abundant			R. Markell					
Moderately Abundant	PRIME							
Slightly Abundant				COMMERCIAL				
Moderate								
Modest	CHOICE							
Small				UTILITY	-			
Slight	SELECT							
Traces			-1771					
Practically Devoid	STANDARD			CUTTER				

<sup>1</sup>Assumes that firmness of lean is completely developed with the degree of marbling and that the carcass is not a "dark cutter." <sup>2</sup>Maturity increases from the left to right (A through E).

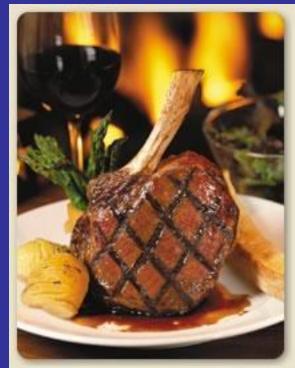
<sup>3</sup>The A maturity portion of the figure is the only portion applicable to bullock carcasses.

What's the no. 1 reason your customers order BEEF?

• TASTE!!! (Or Palatability)

-What influences Taste and Satisfaction

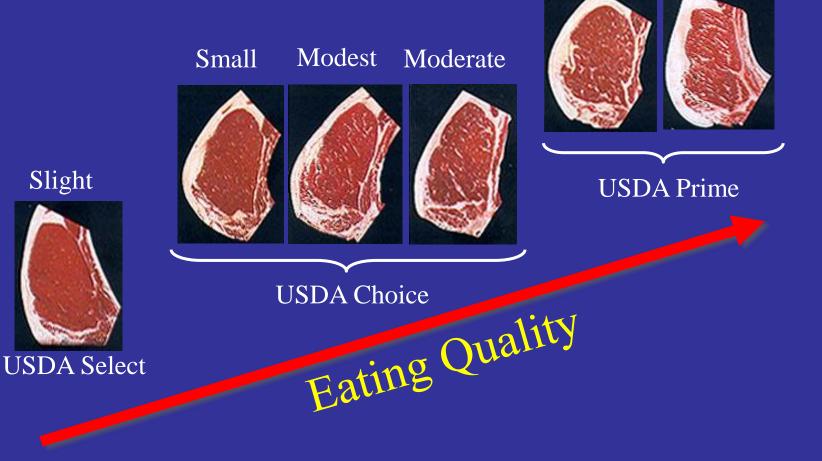
- Tenderness #1
- Juiciness
- Flavor
- Younger, higher marbling carcass usually have it



NolanRyanBeef.com

### **Degree of Marbling**

#### Slightly Abundant Abundant

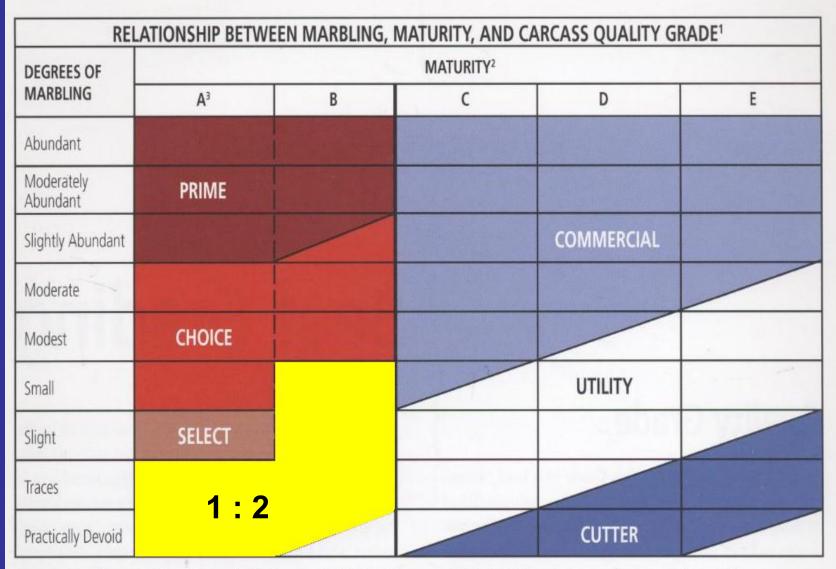


### Tenderness: Striploin Steaks by Quality Grade

Shear Force	e		9	6 Not Tender
Prime 1.91 <sup>d</sup>				0%
High Choice 2.58 <sup>c</sup>				5.3%
Low Choice 2.94 <sup>b</sup>				11.2%
Select 3.19 <sup>a</sup>				17.8%
0	Sh 1.5	ear Force (k 3.0	g) 4.5	6.0

Source: George et al., 1997

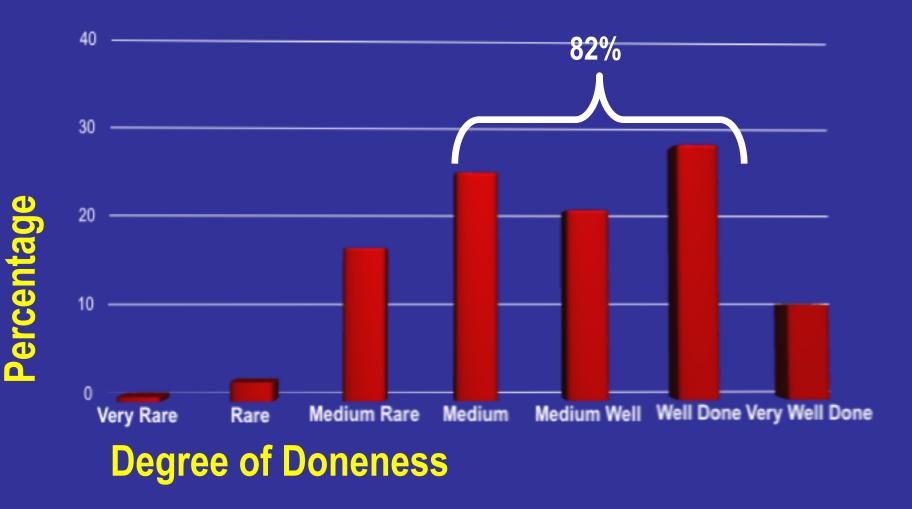
### **Eating Satisfaction**



<sup>1</sup>Assumes that firmness of lean is completely developed with the degree of marbling and that the carcass is not a "dark cutter." <sup>2</sup>Maturity increases from the left to right (A through E).

<sup>3</sup>The A maturity portion of the figure is the only portion applicable to bullock carcasses.

### How Do Customers Like Their Steak?

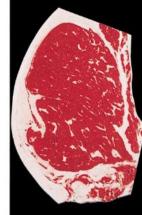


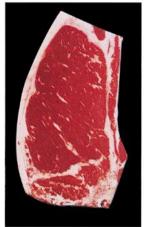
Source: National Livestock and Meat Board

## Can you guarantee an overcooked steak??

- Marbling Contributes
  - Lubrication
  - Insulation
  - Muscle Fiber Dilution and Taste (flavor)
  - Strain



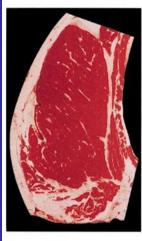


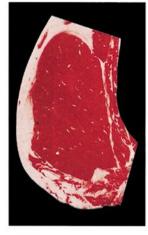


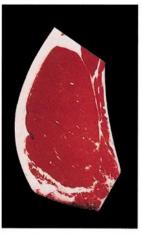
Moderately Abundant Prime

Slightly Abundant

Upper Choice







Modest Small Slight
Upper Choice .ow Choice Select

## Premiums and Discounts based on Quality Grade

Quality Grade	Premium/Discount
Prime	\$10.76
Branded	\$3.82
Choice	\$0
Select	-\$7.14
Standard	-\$18.41

Based on Ch YG 2-3 600-900 pound average 12

### **USDA Yield Grades**



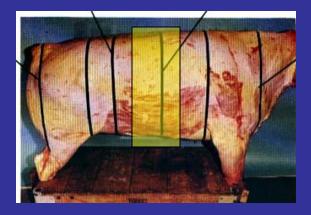
### **USDA Yield Grade**

- Tells us...
  - The Percent of Boneless Closely Trimmed Retail Cuts, that can be expected out of the carcass
  - Based on ratio of Lean to Fat
  - YG1 at least 52.3%
  - YG2
  - YG3
  - YG4
  - YG5

- 50.0 52.3% 47.7 <u>– 50.0%</u>
  - 45.4 47.7%
  - less than 45.4%

Which is more valuable a YG 2 or YG 5?





#### Yield Grade 2 Yield Grade 5

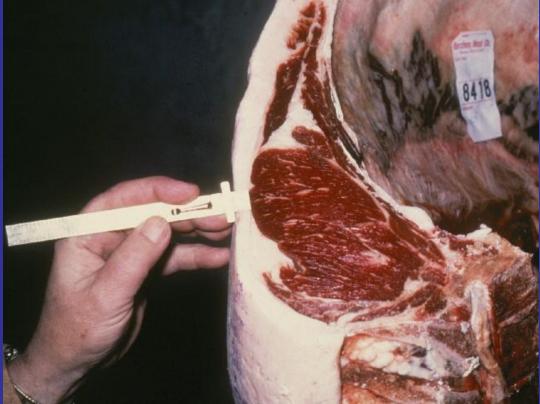






### **Yield Grade Basics**

- Fat Thickness 12<sup>th</sup> Rib Preliminary Yield Grade
- Rib Eye Area
- Hot Carcass Weight
- Kidney, Pelvic & Heart Fat



### 12th Rib Fat and Yield Grade

• Most important, Sets the pace

Fat 12th rib	PYG	Fat 12th Rib	PYG
0	2	0.7	3.75
0.1	2.25	0.8	4.00
0.2	2.50	0.9	4.25
0.3	2.75	1.0	4.50
0.4	3.0	1.1	4.75
0.5	3.25	1.2	5.0
0.6	3.50	1.3	5.25

### Yield Grade Basics

- Fat Thickness 12<sup>th</sup> Rib Preliminary Yield Grade
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#### **Yield Grade Basics**

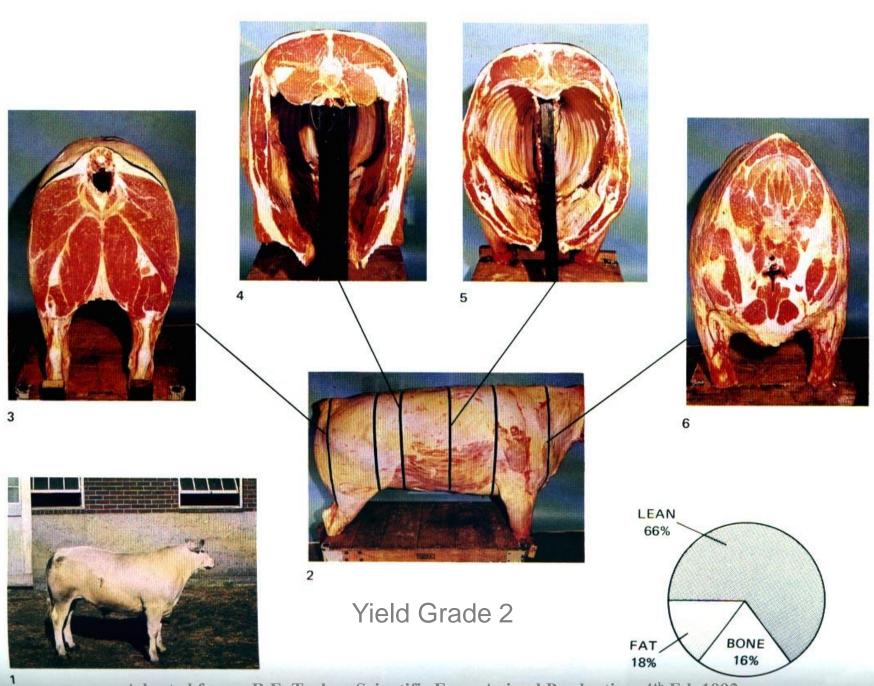
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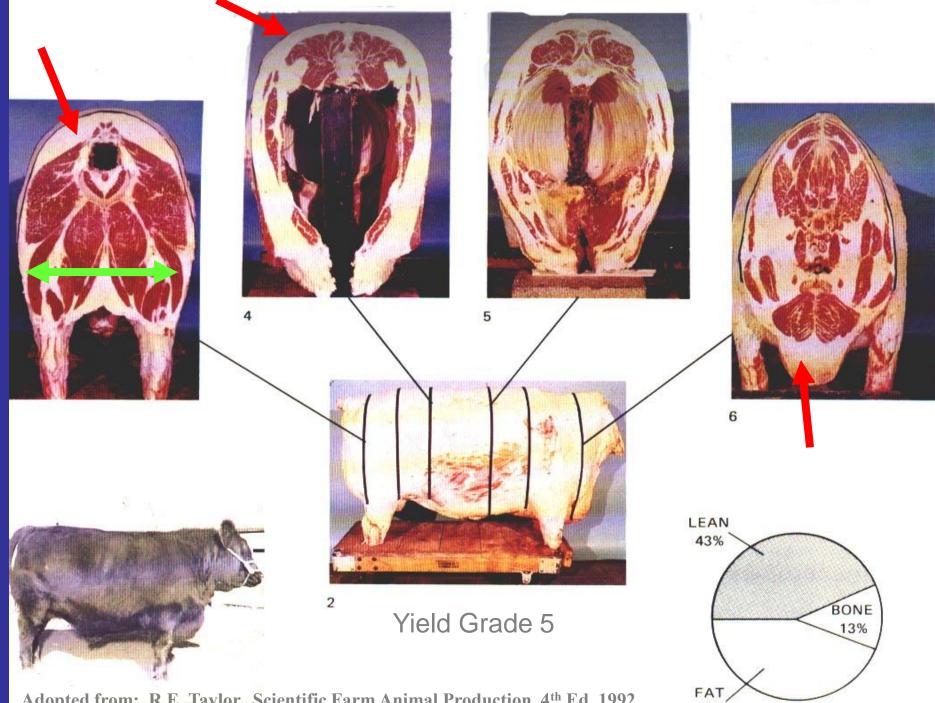
#### Relationship of HCW to REA

HCW	REA	HCW	REA
525	10.1	750	12.8
550	10.4	775	13.1
575	10.7	800	13.4
600	11.0	825	13.7
625	11.3	850	14.0
650	11.6	875	14.3
675	11.9	900	14.6
700	12.2	925	14.9
725	12.5	950	15.2

• YG=2.5+(2.5\*Adj. FT)+(0.2\*KPH%)+(0.0038\*HCW)-(0.32\*REA)

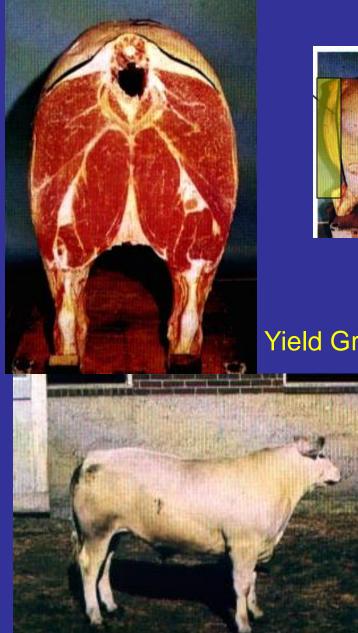


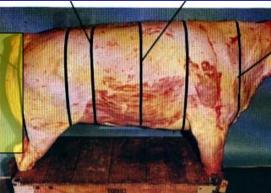
Adopted from: R.E. Taylor. Scientific Farm Animal Production. 4th Ed. 1992.



44%

Adopted from: R.E. Taylor. Scientific Farm Animal Production. 4<sup>th</sup> Ed. 1992.





#### Yield Grade 2 Yield Grade 5





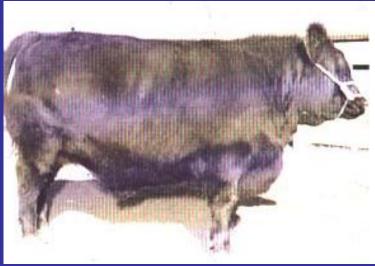




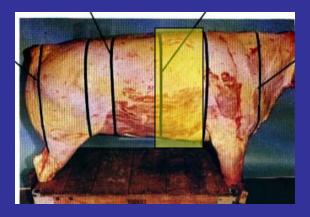
#### Yield Grade 2

#### Yield Grade 5



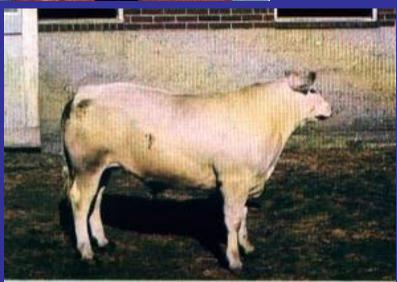




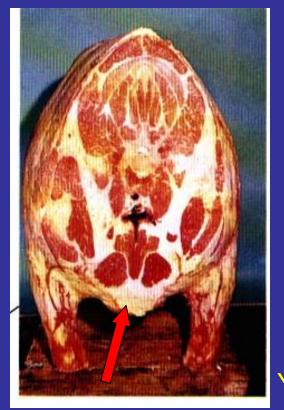


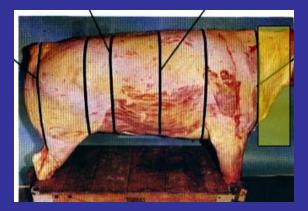
#### Yield Grade 2 Yield Grade 5











#### Yield Grade 2

#### Yield Grade 5

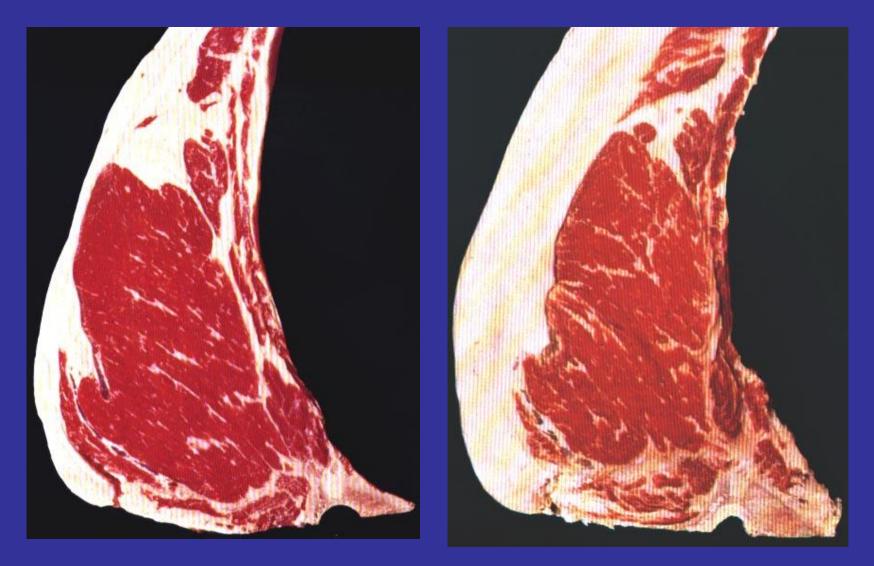




# Combined Premium and Discounts

Equivalent Values for Outlying Beef Carcass Types Basis Value = 148.31 Carcass Weights								
Qlty/Yield	(L)	400-500# -26.92	500-600# -9.82	600-900# 0.00	900-1000# -2.31	1000#/up -18.08		
Prime 1-3 Certified 1-3 Choice 1 Select 1 Stndrd 1-3 Prime 4 Choice 4	10.76 3.82 3.31 -4.26 -18.41 -2.96 -12.46	\$132.15 \$125.21 \$124.70 \$117.15 \$102.98 \$118.43 \$108.93	\$149.25 \$142.31 \$141.80 \$134.25 \$120.00 \$135.53 \$126.03	\$159.07 \$152.13 \$151.62 \$144.07 \$129.90 \$145.35 \$135.85	\$136.76 \$149.82 \$149.31 \$141.76 \$127.59 \$143.04 \$133.54	\$140.99 \$134.05 \$133.54 \$125.99 \$111.82 \$127.27 \$117.77		

#### YG 1 vs YG 5 Ribeye



Adopted from: Meat Evaluation Handbook. 1997. Amer. Meat Sci. Assoc., Savoy, IL.

#### Value Break Out UGA Ribs

Rib	LW	HCW	DP	FT	REA	YG	QG	\$/cwt
9110	1056	657	62	0.25	10.8	2.4	Std	129.9
9290	1268	802	63	0.40	14.0	2.6	SI+	140.7
9023	1323	828	62.6	0.50	13.4	3.0	SI-	140.7
9307	1291	790	61	0.45	15.9	1.8	SI-	144.1