The Characteristics Affecting Consumers' Perceptions and Preferences for U.S. versus Imported Beef

Wendy Umberger

Colorado State University

Dillon Feuz, Chris Calkins, & Bethany Sitz

University of Nebraska-Lincoln

WCC-72 Annual Meetings

Las Vegas, NV

June 9, 2003

Country-of-Origin Labeling

- Country-of-Origin is a Credence Attribute (Caswell, 1998; Loureiro & McCluskey, 2000)
- Mandatory COOL may be an appropriate policy tool if:
  - Asymmetric information exists
  - COOL increases demand for product
  - Disclosure of possible negative quality attributes does not exceed the benefits (Golan et al, 2000)
- Some Consumer, Meat Processors, Wholesalers, Retailers and Restaurants prefer COOL (Schupp & Gillespie, 2001)

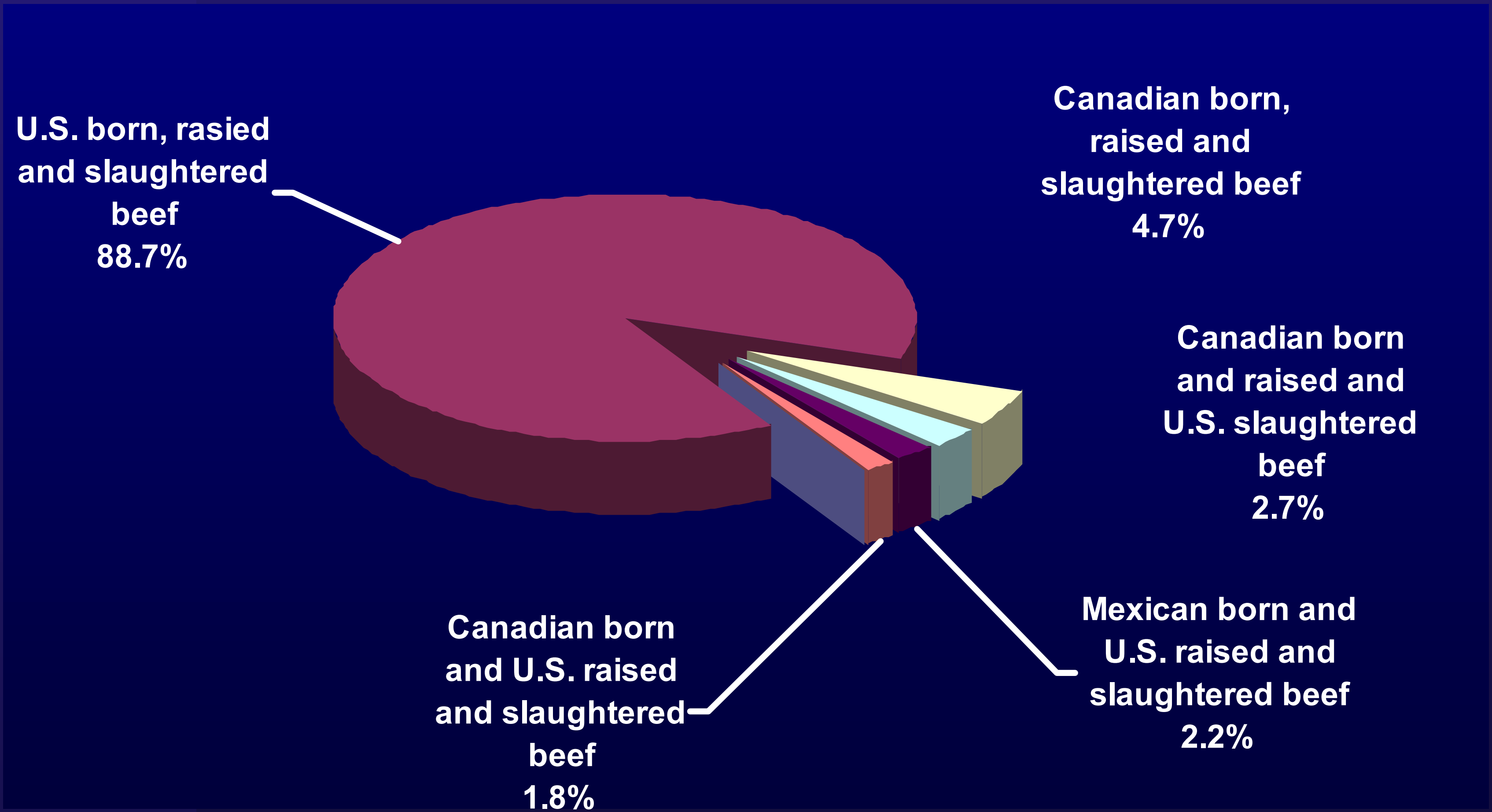
"Estimating Consumer Willingness-to-Pay for Country-of-Origin Labeling." Loureiro and Umberger JARE, 2003

- A Select Group of 243 Colorado Consumers along the front range of Colorado
- in A Survey Conducted In Grocery Stores Would:
  - Pay $183.77 Per Year For Mandatory COOL
  - Pay $1.53/lb. More for Steak
    - 38% Premium for Steak
  - $0.70/lb. More for Hamburger
    - 58% Premium for Hamburger

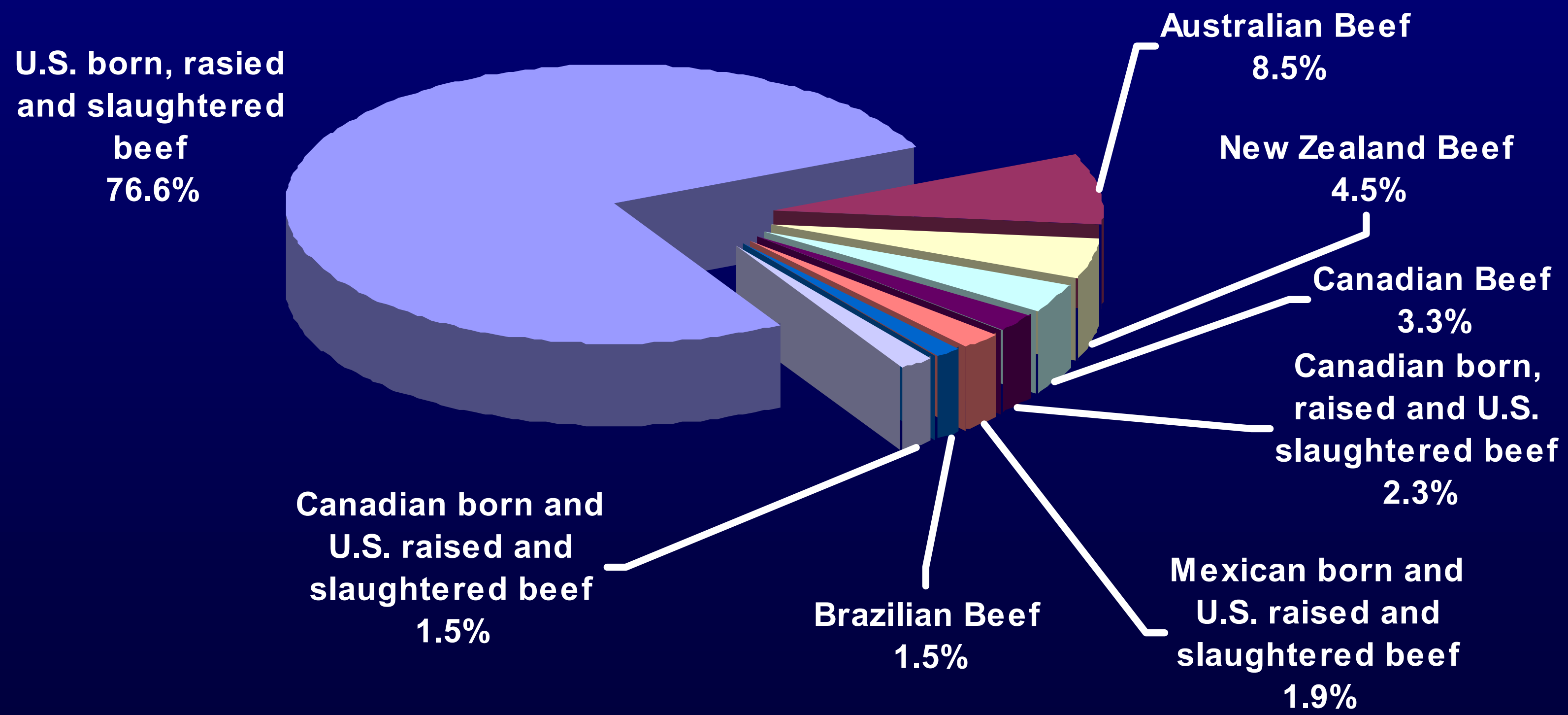
What is Mandatory COOL?

- **Title X of the 2002 Farm Bill Amends the Agricultural Marketing Act of 1946**
- ***"…a Retailer of a Covered Commodity Shall Inform Consumers, at the Final Point of Sale of the Covered Commodity to Consumers of the Country Of Origin Of the Covered Commodity"***

2002 Supply of Roasts and Steaks for U.S. Consumption (source: Plains and Grimes, 2003)



2002 Supply of Beef Trimmings for U.S. Consumption (source: Plains and Grimes, 2003)



Current Objectives

- To Determine
  - Consumers' preferences and WTP for COOL and U.S.A. Guaranteed Label
  - Attributes important to consumers' purchase decisions
  - Consumers' preferences and WTP for steak after tasting
    - Canadian vs. US
    - Australia vs. US
  - Segment of consumers WTP premium for preference

Methods

- 273 Consumers in Denver and Chicago
  - Paid $50 to participate
  - Surveyed on WTP for COOL Hamburger and Steak
  - Experimental Process
    - Random *n*th Price Auction
  - Bid on "USA Guaranteed: Born and Raised in the U.S." Labeled & Unlabeled Steak
  - Tasted, Rated and Bid on pairs of steak with tenderness and marbling held constant within a pair
    - Canadian vs. US
    - Australia vs. US

Consumer Demographics

- 87% Caucasian
- 73% Female
- ~ 40 yrs old
- Married
- 63% Children < 18 at home
- Income $50-$60 K
- Employed
- Average Education of Some College
- 70 % Prefer to Consume Beef

Important Food Characteristics

Loureiro and Umberger

Extremely to Very Desirable

1. Fresh
2. Food Safety Inspection
3. High Quality
4. Lean
5. Visual Presentation

Very to Somewhat Desirable

7. Source Assurance
9. Beef Raised in your region of the country

Umberger, Feuz, Calkins & Sitz

Extremely to Very Desirable

1. Fresh
2. Food Safety Inspection
3. Color
4. Price
5. Leanness

Very to Somewhat Desirable

9. COOL
11. Source Assurance
13. Beef Raised in your region of the country

Consumers' Rationale for Preferring COOL
(75 % Preferred Labeled, 22% Indifferent)

- **Safety and Health of Meat, 45%**
  - **U.S. better regulations and standards**
  - **Mad Cow Disease**
- **More Information (*Awareness of conditions, Identify meat if Outbreak Occurs*), 31.8%**
- **Support Producers (U.S.), 21%**
- **Location (*Prefer from certain countries, Learn about countries*), 12.5%**
- **Quality of Meat Higher in U.S., 11%**
- **Freshness of Meat Closer to Home, 4.5%**

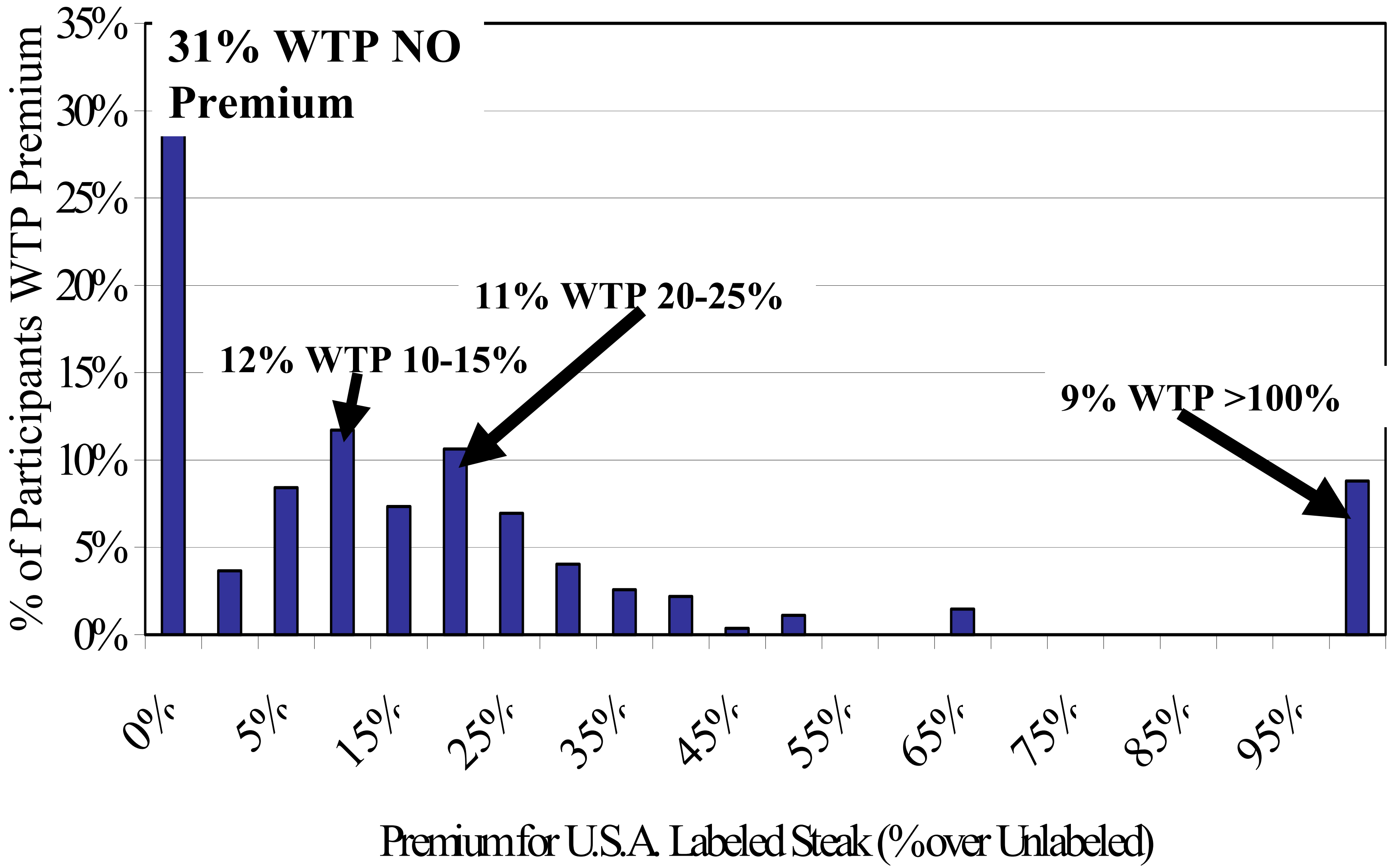

Born and Raised
USA Guaranteed
In the United States of America

Survey WTP Results: Umberger, Feuz, Calkins, Sitz

- "COOL Steak"
  - 73% Consumers were WTP Premium
  - $0.42 over $4.00/lb
  - 11% Premium for label
- "COOL Hamburger"
  - 72% Consumers were WTP Premium
  - $0.36/lb over $1.50/lb
  - 24% Premium for label
  - Higher than for Steak
- Overall Premiums Smaller than Loureiro and Umberger

Visual Auction WTP Results: "U.S. Guaranteed Steak" versus Unlabeled Steak

- Chicago
  - $1.03/lb more for "U.S. Guaranteed Steak" (base = $4.53/lb)
  - 23% Premium for labeled steak
- Denver
  - $0.57/lb more for "U.S. Guaranteed Steak" (base = $4.12/lb)
  - 14% Premium for labeled steak
- Overall
  - $0.81/lb more for "U.S. Guaranteed Steak" (base = $4.33/lb)
  - 19% Premium for labeled steak
- Chicago Premiums were Larger than Denver



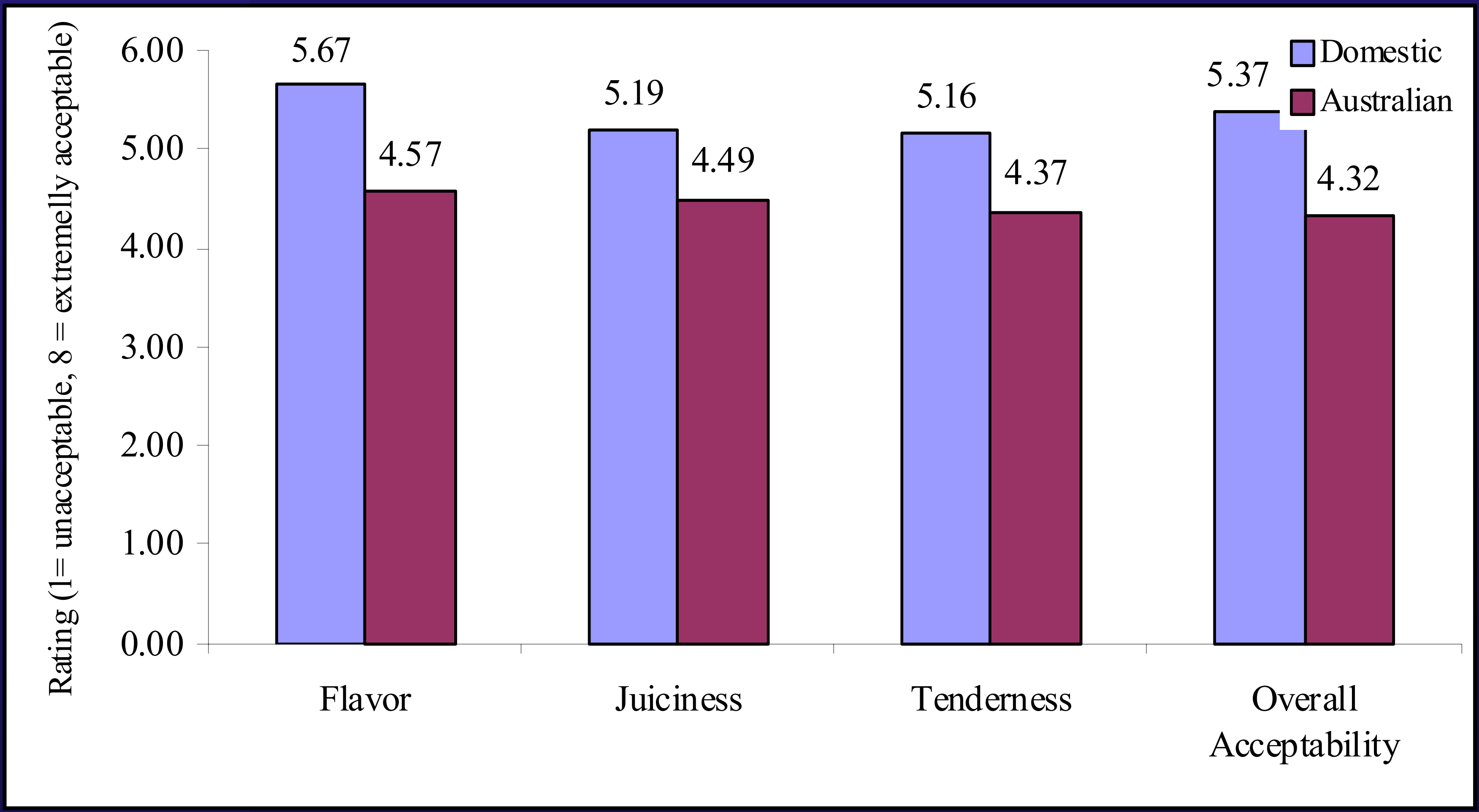
31% WTP NO Premium
12% WTP 10-15%
11% WTP 20-25%
9% WTP >100%
% of Participants WTP Premium
35%
30%
25%
20%
15%
10%
5%
0%
0%
5%
15%
25%
35%
45%
55%
65%
75%
85%
95%
Premium for U.S.A. Labeled Steak (% over Unlabeled)

Who's WTP for COOL?: Logit Model

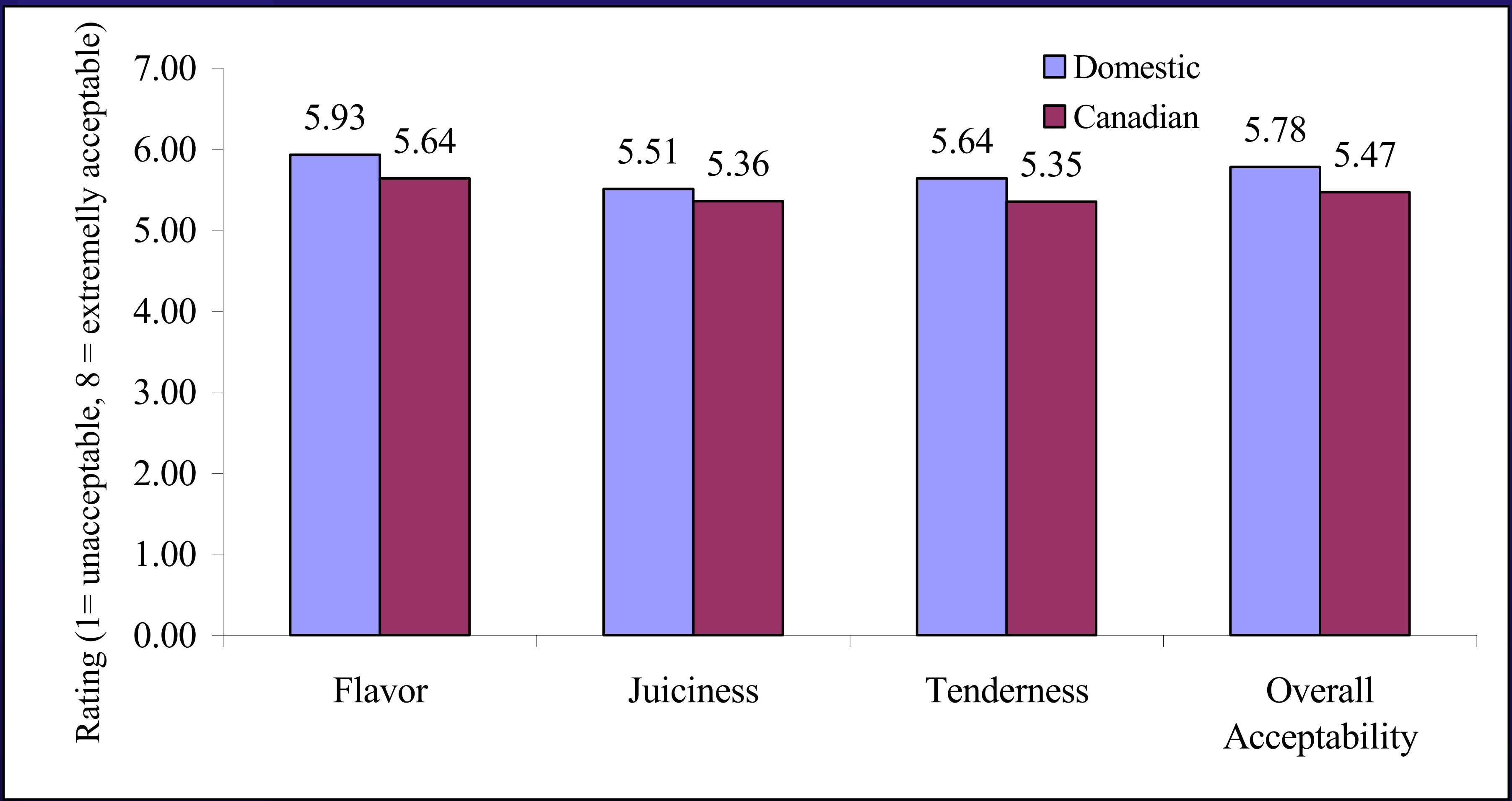
$$USAPREF_i = \beta_0 + \beta_1 Location_i + \beta_2 Age_i + \beta_3 Gender_i + \beta_4 Ethnic_i + \beta_5 Kids_i$$
$$+ \beta_6 Income_i + \beta_7 Educate_i + \beta_8 Safety_i + \beta_9 Source_i + \beta_{10} COOL_i + \beta_{11} Local_i$$
$$+ \beta_{12} Fresh_i + \beta_{13} Organic_i + \beta_{14} BeefEat_i + \beta_{15} NonGrocery_i + \beta_{16} USDAGRADE_i + \varepsilon_i .$$

- Consumers concerned about Food Safety and Source Assurance
- Females with children
- Lower Income
- Higher Educated
- Beef eaters
- Consumers purchasing beef at alternative locations

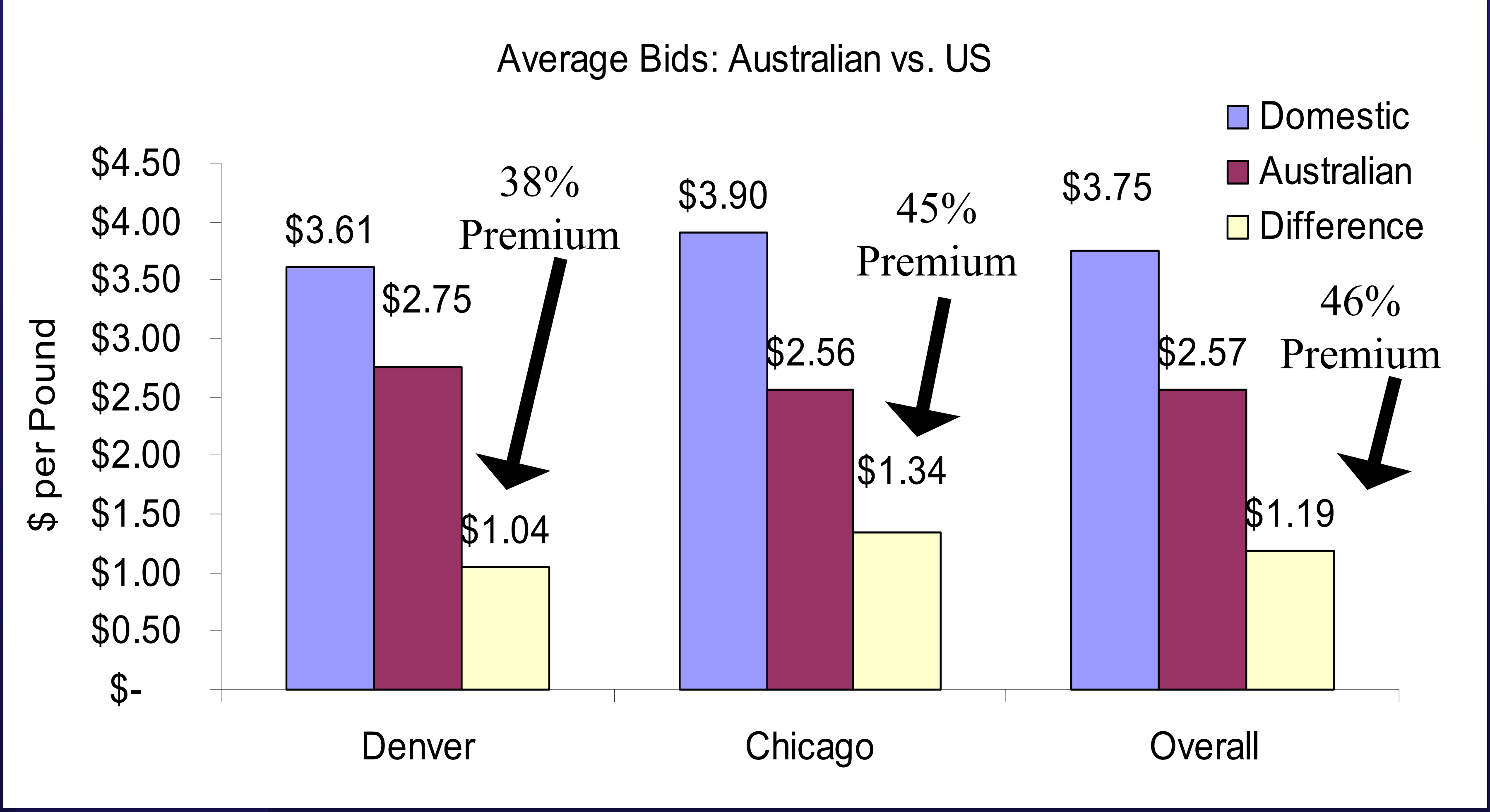
Can Consumers Perceive a Difference in Flavor? : Australian vs. Domestic



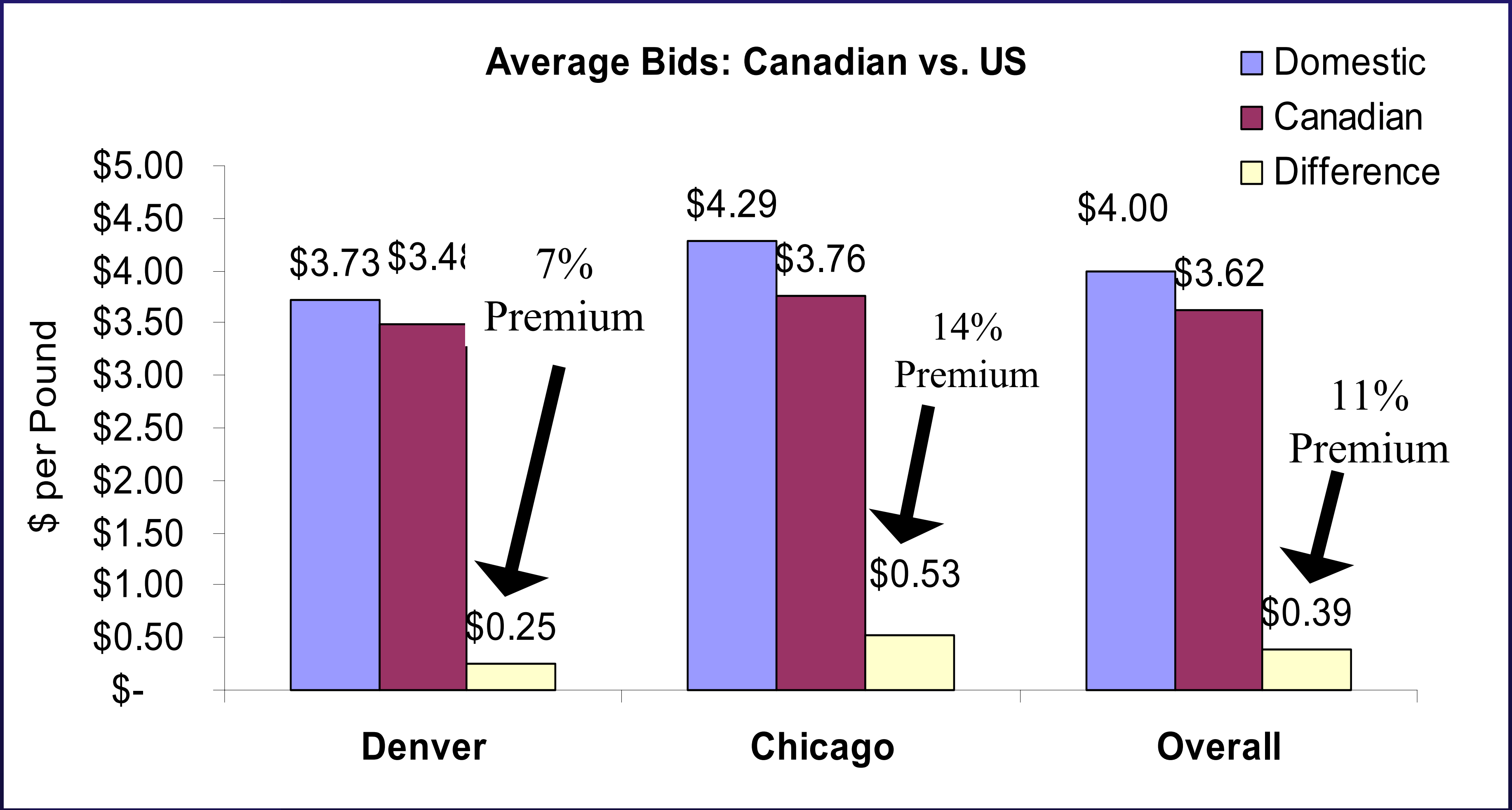
Can Consumers Perceive a Difference in Flavor? : Canadian vs. Domestic



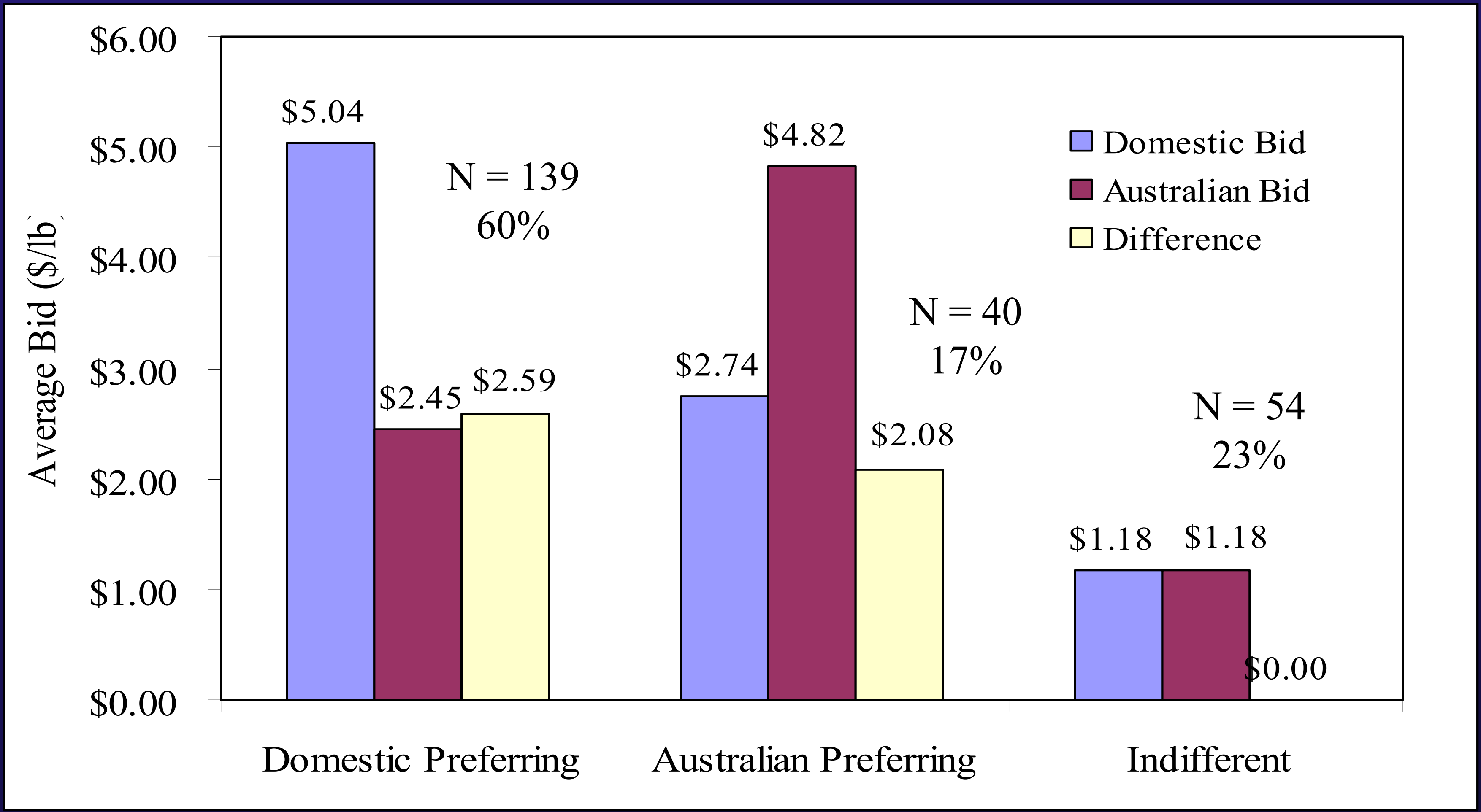
Average Willingness-to-Pay: Australian vs. US



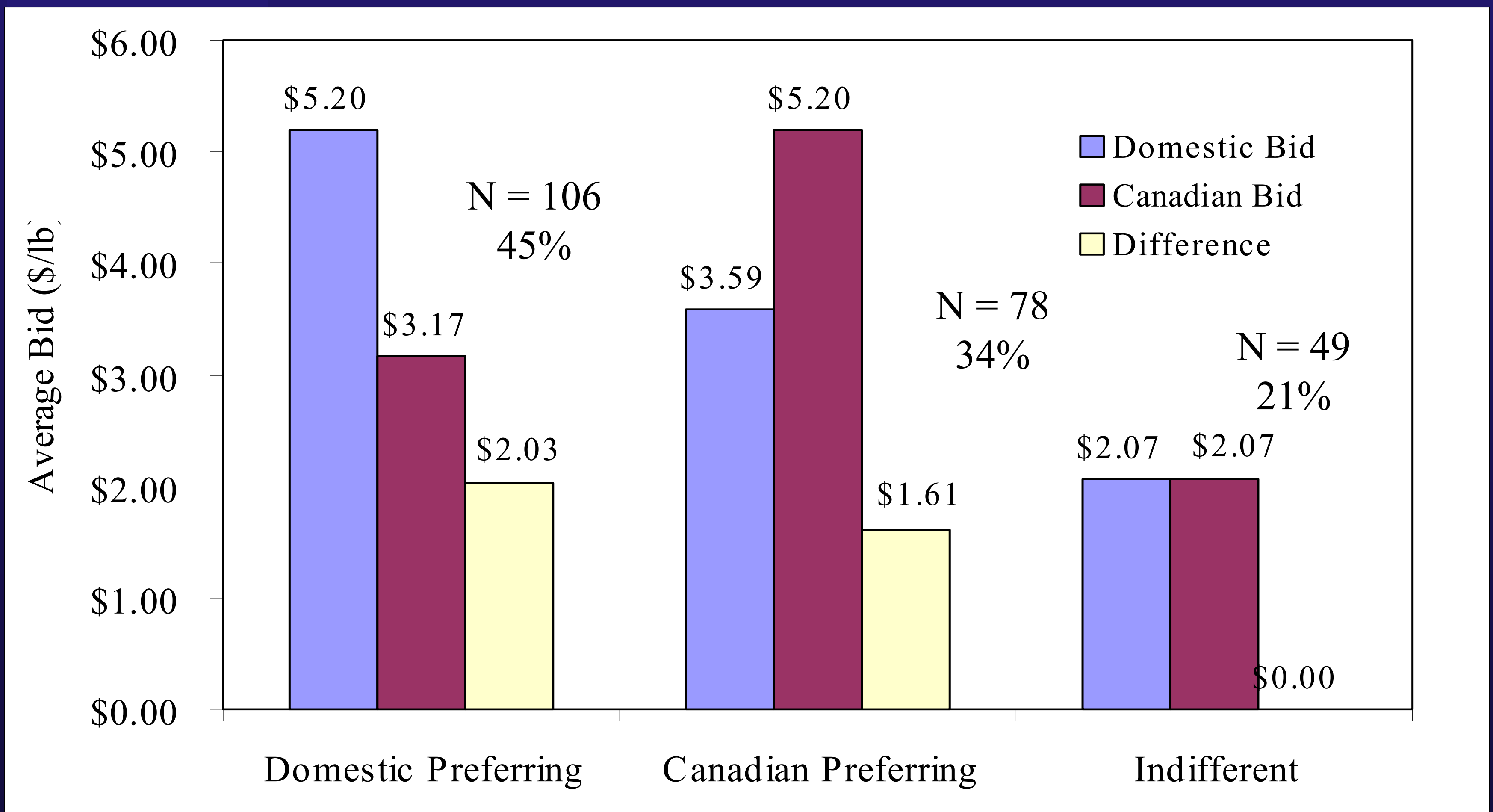
Average Willingness-to-Pay: Canadian vs. US



Are Consumers Willing-to-Pay for their Taste Preference?: Australian vs. US



Are Consumers Willing-to-Pay for their Taste Preference?: Canadian vs. US



Predicting Flavor Preferences

$$TASTE\ PREF_i = \beta_0 + \beta_1 Location_i + \beta_2 Gender_i + \beta_3 Ethnic_i + \beta_4 \Pr iceDrive_i$$
$$+ \beta_5 Income\ 2_i + \beta_6 BeefEat_i + \beta_7 MarryKids_i + \beta_8 Age\ 2_i + \beta_9 GradeDK_i$$
$$+ \beta_{10} Educate\ 2_i + \beta_{11} NoEmploy_i + \varepsilon_i.$$

- **Multinomial Logit Model**
- **Australian vs. US**
  - **Domestic Preferring: Chicago, Higher Income, Married with Kids, Older**
  - **Australian Preferring: non Chicago, Lower Income**
- **Canadian vs. U.S.**
  - **Domestic Preferring: Caucasian, Married with Kids, Older**
  - **Canadian Preferring: Non Caucasian**

Summary

- Consumers WTP significant Premium for COOL
- Premium appears to be higher when the label states “U.S. Certified” or “U.S. Guaranteed”
- 11% Premium for COOL Steak
- 24% Premium for COOL Hamburger
- 19% Premium for U.S. labeled
- WTP is significantly Higher for Hamburger

Who's WTP for COOL?

- Consumers concerned about Food Safety and Source Assurance
- Females with children
- Lower Income
- Higher Educated
- Beef eaters
- Consumers who purchase beef at alternative locations

U.S. vs Imported Taste Summary

- 29% of consumers consistently preferred the taste of domestic to imported steak
- Likely due to similarities in US and Canadian Production Processes
- Niche for Australian or Imported Grass-Fed Product
- Canada could compete with US if same quality

COOL Implications

- Will COOL increase beef demand?
- Appears consumers don’t understand that it’s not food safety
- Placement of label and other meat attributes
  - (food safety concerns important)
- What about other meat products?
- U.S. versus major importers?
- Do premiums cover costs?

Questions?