

## COMPARISON AMONG COMMERCIAL BEEF CUTS IN BRAZIL, AUSTRALIA AND THE UNITED STATES

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## Introduction

The three major beef producing and exporting nations are currently Australia, the United States and Brazil. In each country, beef carcasses are boned and fabricated into wholesale and retail cuts according to either local or international standards, depending on whether the products are destined for the domestic or export markets. As the beef industry becomes more globalized, the need for standardization of meat cuts among different markets is increased. The European Union recently adopted a version of the Aus-Meat standards to facilitate communication and commerce of beef, making the Australian system of cutting and nomenclature the *de facto* international standard. Brazil and the United States have internal systems that are different from each other and from the Australian standards, and that also vary within each country.

## Objectives

This report aims to provide a basis for comparison of cutout data from different countries, by cross-tabulating standard beef cuts according to the standards prevailing in Brazil, Australia and the United States.

## Methods

A list of standard beef cuts was compiled for each of the three countries, Brazil, Australia and the United States (US). Although there are large variations in cuts within each country, an attempt was made to identify prevailing standards from published sources (e.g., SWATLAND, 2000) and direct industry contacts. In Brazil, the published standard was established by the National Department of Inspection of Products of Animal Origin (DIPOA) within the Ministry of Agriculture (Ministerial Regulation No. 5, of 11.08.1988 - 15) (MAPA, 1990; PARDI *et al.*, 1996; SCVCF-SP, 1999). In Australia, the AUS-MEAT publication (AUS-MEAT, 1998) gives detailed descriptions of all commercial beef cuts, including anatomical markers. For the US, the publication from the North American Meat Processors Association (NAMP, 1997) was taken as a guide. As far as was possible, beef cuts from each country were studied to determine the equivalence across standards. Due to differences in cutting methods, not all cuts had exactly equivalent counterparts, and in these cases an approximate equivalence was determined, based on the corresponding muscles, skeletal bases, and preparation of primal and retail beef cuts.

## Results and discussion

The beef carcass consists of the animal that has been stunned, bled, decapitated, skinned, and eviscerated, after removal of the tail, feet, mammary glands (in the female) and testicles (in the male). Packers generally saw the carcass longitudinally, dividing it into two carcass halves. In the US, the kidneys, thoracic, peri-renal and inguinal fat and the spinal marrow remain on the carcass, whereas in Brazil these are removed. After chilling (usually), the carcass halves are broken into wholesale or primal cuts: in Brazil, these are the *dianteiro* (forequarter), *traseiro especial* (special hindquarter) and *ponta de agulha* (brisket), whereas in Australia and the US these are the chuck, shank, brisket, rib, short plate, flank, loin and round.

Each of the wholesale cuts is further separated into retail cuts, according to the standards of each market. Table 1 presents the main cuts for each country, and the equivalent for each of the others. Several points stand out from these comparisons. The Brazilian cuts tend to separate beef cuts along more anatomical divisions, as compared to the Australian and US cuts corresponding to the same muscles. This may be due to differences in throughput, and in the relative costs of labor and mechanized equipment among countries. In Australia and the US, packers process more animals per day, and have higher labor costs than in Brazil. Therefore, in order to minimize labor and maximize production, packers in these countries process larger and less anatomical cuts using mechanical means (e.g., band saws) as compared to the laborious production of anatomical beef cuts produced by hand in Brazil. For this and other reasons (i.e., cultural similarities), beef cuts in Australia and the US are more comparable with each other than with Brazilian beef cuts.

## Conclusions

Globalization of the beef industry requires the development of international standards to facilitate communication between buyers and sellers. One of the great obstacles to the growth of Brazilian beef exports is the lack of standardized cuts and the ignorance of the comparative nomenclature in the international market. This work is presented as an aid for the comparison of beef cuts among the largest producers and exporters in the world market.

## References

- AUS-MEAT (1998) *Handbook of Australian Meat*, 6<sup>th</sup> Ed. AUS-MEAT Ltd., South Brisbane, QLD, Australia.
- MAPA (1990) *Padronização de Cortes de Carne Bovina*. Ministério da Agricultura e Pecuária / SNAD / SIPA, Brasília, Brazil.
- NAMP (1997) *The Meat Buyers Guide*. North American Meat Processors Association, Reston, VA, USA.
- PARDI, M. C., I. F. DOS SANTOS, E. R. DE SOUZA, H. S. PARDI (1996) *Ciência, Higiene e Tecnologia de Carne*, Volume 1, 1<sup>a</sup> Edição. Universidade Federal de Goiás, Goiânia, Brazil.
- SCVCF-SP (1999) *Carnes e Cortes*. Sindicato do Comercio Varejista de Carnes Frescas do Estado de São Paulo / SEBRAE, São Paulo, SP, Brazil.
- SWATLAND, H. J. (2000). *Meat Cuts and Muscle Foods*. Nottingham University Press, Nottingham, UK.

Table 1. Retail beef cuts in Brazil, Australia and the US

Brazil	Australia	United States of America
Acém	Chuck	Chuck roll
Alcatra (miolo)	Rostbiff	Top sirloin butt
Bananinha	Intercostals (rib fingers)	Rib fingers, boneless
Bife da ponta de agulha	Brisket - deckle off	Outside skirt (plate)
Bisteca	*	Rib / strip loin steak, bone in
Braço	Armbone shin	Foreshank
Capa de costela	Chuck meat square	*
Capa do contra filé	*	Ribeye cap
Carne de panela em cubo de qualquer músculo	Diced Beef	Diced / stewing beef
Carne moída	Minced beef	Ground beef
Contra filé	Striploin	Strip loin / ribeye
Contra filé com costela e capa	Ribs - prepared	Beef rib, oven-prepared
Costela	Rib ends	Back ribs
Costela sem osso	Spare ribs	Back ribs, boneless
Costelinha	Short ribs	Short ribs, trimmed
Coxão duro	Outside flat	Outside round (flat)
Coxão mole	Topside / inside - cap off	Top (inside) round, cap off
Cupim	Chuck crest	Hump
Filé mignon	Tenderloin	Tenderloin, full
Fralda	Internal flank plate	Skirt steak
Fraldinha / entranha fina	Thin skirt	Thin skirt
Ganhadora / raquete	*	Chuck cover
Lagarto	Eye round	Eye of round
Lombinho	Thick skirt	*
Maminha	Bottom sirloin triangle (tritip)	Bottom sirloin butt (tri-tip)
Músculo (braço)	Shin / Shank	Foreshank
Músculo (traseiro)	Shin-special trim	Shank
Pacu (bife do vazio)	Flank steak	Flank steak
Paleta	Blade (clod)	Shoulder clod
Patinho	Knuckle	Knuckle, peeled
Peito	Brisket point end plate	Brisket, deckle-off, boneless
Peixinho	Chuck tender	Chuck tender
Pescoço	Neck	Neck
Pescoço e acém	Chuck	Chuck
Picanha	Rump cap	Top sirloin cap
Picanha e alcatra	D-Rump	Top sirloin butt, Boneless
Ponta de agulha sem osso	Brisket - deckle off	Inside skirt (plate)
Sete de paleta	Oyster blade	Oyster blade
Tibone	*	Porterhouse / T-bone steak
Traseiro especial	Pistola hindquarter	Beef round (Primal)
Vazio	Thin flank	Flank steak

\* No equivalent cut could be determined.