

## TenderBuff

# A Healthy and Exciting Alternative Red Meat

B. Lemcke, Livestock Management Officer, D. Ffoulkes, Ruminant Nutritionist, Pastoral Production, Darwin, K. Hedenig, Charles Darwin University Faculty of Business, School of Tourism and Hospitality Management and Neil Ross, Executive Officer, NT Buffalo Industry Council

---

### INTRODUCTION

When the first settlement was established at Fort Dundas on Melville Island in 1824, Captain Barlow wrote, "I believe that the only articles necessary to keep the people in good health are fresh meat and vegetables. I still have from Timor three buffaloes which I will keep in hopes of their exertions to increase our stock". It was from the "exertions" of these animals and from those that escaped from Port Essington later, that the NT buffalo herds of today were produced. Since that time, Territorians and tourists alike have enjoyed buff (buffalo meat). What's more, TenderBuff steaks are becoming the trendy flavour in restaurants all around Australia.

TenderBuff has now been in constant production in Darwin for over 16 years. It is steadily becoming available at selected butcher shops and some supermarkets in an increasing number of States in Australia. It is hoped that Territorians will take advantage of this local commodity and use the various cuts of meat for home cooking as they would for beef. Because of some inherent qualities of buffalo (mentioned below), it is expected that TenderBuff will become readily available, often used and a readily acceptable part of the Australian diet in the future. While it is exceedingly difficult to break the hold on the market by the "Big Four" (beef, lamb, pork and chicken) TenderBuff could capture some market share. Restaurants are always looking for something different to put on the menu, and TenderBuff is not unlike beef, with some striking differences in qualities for a healthy lifestyle.

### WHAT IS TENDERBUFF?

TenderBuff is meat from young buffalo that have been fed and managed specifically to produce good quality lean meat. The meat undergoes the same processing techniques as prime beef to ensure that all the cuts are tender. The carcass is inspected and tested at the abattoir and is strip branded on the exterior if it meets the five quality control criteria required for certification. Only when the carcass achieves TenderBuff certification does the producer receive the premium price. Discounts apply for each shortcoming in specification, so the producer has financial incentives to produce to specifications. The carcass brand readily identifies the certified quality product to both the butcher and the consumer.



## DIFFERENCES BETWEEN TENDERBUFF AND BEEF

### 1. Less fat

From a health point of view, TenderBuff has about 30% less saturated fats in the lean meat than beef, which helps to keep your blood cholesterol down. Furthermore, there are higher levels of polyunsaturated fatty acids in the meat, which are beneficial in reducing blood cholesterol. Altogether, total fat content of lean meat from TenderBuff is less than half that found in lean beef. The cholesterol content is also lower, in comparison with other meat species such as chicken, beef, pork and fish.

**Table 1.** Nutrient analysis of meat types per 100 g raw lean edible portion \*

|            | Energy | Protein | Iron  | Fat   | Cholesterol | Saturated fat | Monounsaturated fat | Polyunsaturated fat |
|------------|--------|---------|-------|-------|-------------|---------------|---------------------|---------------------|
| TenderBuff | 416 kJ | 20.4 g  | 1.6 g | 1.4 g | 46 mg       | 0.46 g        | 0.42 g              | 0.27 g              |
| Beef       | 502 kJ | 22.0 g  | 2.2 g | 3.7 g | 60 mg       | 1.60 g        | 1.52 g              | 0.24 g              |
| Chicken    | 506 kJ | 21.0 g  | 1.1 g | 4.2 g | 69 mg       | 1.18 g        | 1.81 g              | 0.47 g              |

\*AMLC Food Service

### 2. Darker colour

The colour of TenderBuff tends to be slightly darker than beef of comparable age and growing conditions because of its higher myoglobin pigment content. This darker colour is not related to tenderness directly. However, as with beef, colour differences **between** buffalo carcasses **can** be caused by both age (younger is generally lighter coloured) and pH (lower pH gives a lighter colour and increased tenderness). Increased stress levels before slaughter will increase post-slaughter pH in the carcass. Therefore, a lighter colour between meats from different buffalo will generally indicate greater tenderness, due to a younger age and/or a lower level of stress at slaughter.

### 3. Cooking techniques

Generally speaking, the quality (tenderness) of buffalo meat is indistinguishable from that of cattle of comparable **age, condition, sex** and the **same processing method**. Most of the differences lie in the cooking methods used. Cooking methods need to be altered for buffalo meat due to its lower fat content, to reduce moisture losses. This can be achieved by sealing when cooking at high temperatures, reducing cooking times or temperatures, wet cooking or any combination of the above.

### 4. Flavour

TenderBuff tends to have a slightly stronger (richer) flavour than beef from comparable cattle at the same **age, condition, weight** and **sex**.

### 5. General suggestions for cooking TenderBuff

- As with beef, TenderBuff cuts have a range of uses in dry cooking methods such as frying, grilling, roasting and with wet cooking methods such as stews, minces and casseroles, as well as use in a wide variety of small goods.
- As with most lean meats in general, TenderBuff should be cooked for shorter times than would be done for beef to retain the natural moisture (juiciness) in the muscle. As the TenderBuff muscle contains much less fat than beef, overcooking will tend to dry out the meat because of the lack of fat to compensate for cooking juice moisture loss.
- The best steak cuts are the eye fillet (tenderloin), scotch fillet (cube roll), rump, porterhouse (strip-loin) and round (knuckle). Topside and rump are very good for roasts. Blade and chuck are normally used for casseroles and curries. Buffalo chuck makes excellent pies.

- Steaks are best if not cooked to more than “medium-rare”. Make sure the cooking plate is sizzling hot when the steak is applied to seal in the natural meat juices. If you prefer your steak well done it may be best to soak TenderBuff in good quality polyunsaturated vegetable oil or marinade before cooking.
- Roasts are best done in oven bags with your favourite condiments or can be soaked in water with one table spoon of vinegar per kilogram of meat to enhance juiciness. Cook according to taste for 45 to 60 minutes per kilogram of meat at normal roasting temperatures.
- TenderBuff silverside makes excellent corned meat and the many other cheaper cuts can be substituted for beef in stews, curries or pies. The chuck is excellent in wet cooking dishes.
- TenderBuff Pastrami – made from the eye of the silverside – is corned and baked in a slow oven on a rack above a tray of water. It is covered with cracked pepper and herbs prior to baking – absolutely fabulous!
- TenderBuff sausages and burgers are generally readily available and very popular. Be careful with cooking times as over-cooking can lead to dryness in these products. Burgers need to be cooked slowly over low to medium heat.
- Because of its low fat content, TenderBuff mince is the ideal premium mince for Italian dishes such as bolognaise or lasagne.

## **TIPS ON COOKING BUFFALO BURGERS/RISsoles**

Thaw the burgers out completely, (standing on their edge in the dish, drying rack works well and doesn't take long).

Use as little oil as possible.

Cook on low to medium heat (the slower the better), if you cook them too fast they will get a hard crust and also tend to shrink in diameter and rise up like a ball.

If you are cooking for a large group, pre heat the BBQ on low/medium and then switch it off; peel the plastic discs from both sides of the burgers and lay them out in rows on the BBQ plate until it is fully covered.

Light the BBQ and leave on low/medium heat and commence to turn the burgers from the first one that went on the plate onwards.

Continue to methodically turn the burgers until they are a nice light brown. (If the sides of the burger are still holding a pink/red colour your heat is a little low). Cut a sample burger in half and check to see if it is cooked through.

Properly cooked burgers also make a great cold snack or a school lunch addition.

Burgers can also be cooked on lightly oiled trays in an oven. This may be useful for caterers. Low heat is again best. A small trial sample should be done to work out what is best for your oven.

## 6. Some recipe suggestions from Klemens Kedenig

### (a) *TenderBuff Stroganoff*

Ingredients - four main course portions

|                       |  |
|-----------------------|--|
| 800 g TenderBuff rump | 100 g pickled gherkins, chopped                        |
| 150 g plain flour     | 200 g button mushrooms, sliced                         |
| 50 mL oil             | 200 mL sour cream                                      |
| 100 g onions          | 250 mL buffalo stock (if not available use beef stock) |
| 3 peppercorns         | 10 g chopped parsley                                   |
| 1 bay-leaf            | Salt and pepper to taste                               |

#### Method

Trim meat of fat and sinews, cut into thin strips (2.5 cm by 1 cm, approximately) and dust with about half of the flour. Heat oil in a stew pot, add buffalo strips and cook until golden brown. Add onions and stir-fry for about five minutes. Add buffalo stock, peppercorns, bay leaf, gherkins and button mushrooms. Bring to boil and simmer for about one hour or until tender.

Blend 150 g of sour cream with the rest of the flour and add to the pot, stirring constantly to avoid a lumpy appearance. Simmer for another 10 minutes and adjust seasoning with salt and pepper. Transfer stroganoff into a serving dish; place the remaining sour cream in the centre and sprinkle with chopped parsley.

### (b) *Buffalo Bush Burger*

Ingredients - four main course portions

|   |   |
|---|---|
| 800 g lean TenderBuff mince blade/chuck | 4 burger buns   |
| 100 g onions, finely diced              | 100 g tomatoes sliced   |
| 30 g parsley, chopped                   | 100 g onions, sliced into rings                                     |
| 1 pinch allspice                        | 40 g butter   |
| 5 mL Worcestershire sauce               | 30 mL oil   |
| 2 eggs                                  | Some lettuce  |
| 50 g bread crumbs                       | Salt and pepper to taste and, if absolutely necessary, tomato sauce |
| 10 g mustard                            |   |

#### Method

Place meat in a suitable sized bowl; add diced onions (which should be lightly pre-cooked), parsley, allspice, Worcestershire sauce, eggs, breadcrumbs, mustard and season with salt and pepper. Blend mixture until well combined. Divide into four equal balls and shape into round burger patties about 2 cm thick. Heat some oil in a frying pan and fry patties on medium heat until golden brown (about five minutes). At the same time, fry onion rings. Assemble buffalo burger in toasted buns by topping with lettuce, tomatoes and fried onions or any greens of your liking.

(c) *Marinated Buffalo Fillets*

Ingredients - four main course portions

|  |                                 |
|--|---------------------------------|
| 1 kg buffalo fillets, fat and sinew removed and cut into 80-100 g pieces | 100 mL light soy sauce          |
| 100 g peanut butter  | Flour for coating fillet pieces |
|  | Oil for shallow frying          |

**Method**

Mix light soy sauce and peanut butter into a paste, pour over buffalo fillets, mix again then let the meat marinate in a fridge for a day. Before cooking coat meat on both sides with flour and shallow-fry in a hot frying pan until done to your liking. The cooking method “shallow-frying” implies that more oil is used in the cooking process than in sautéing. This allows a rather crisp finish. The cooking time is around two to four minutes. Steamed or braised rice and vegetables can accompany the dish.

(d) *Baked Eggplant with Buffalo Filling*

Ingredients - four entrée portions

|                              |                            |
|------------------------------|----------------------------|
| 2 large eggplants            | 20 mL Worcestershire sauce |
| 250 g lean TenderBuff minced | Pinch ground cinnamon      |
| 100 g bacon, minced          | Pinch ground cloves        |
| 50 g onions, chopped         | 30 mL oil                  |
| 50 g fennel, chopped         | 50 g breadcrumbs           |
| 2 eggs (one for glazing)     | Salt and pepper to taste   |

**Method**

Cut eggplants length-wise into halves and boil in salted water for about three minutes. Drain, set aside and allow to cool. Using a spoon, scoop out the seeds and some of the pulp, leaving the skin intact, and mix with the buffalo and bacon mince. Heat some oil in a frying pan and sauté onions- mince mixture for a while, and then mix in lightly beaten egg. Season with salt and pepper, fill eggplant halves with the mixture piling it quite high. Brush the top with beaten egg, sprinkle with breadcrumbs and bake at 200°C for about 30 minutes. Garnish with fresh herbs and serve.

(e) *Buffalo Parcels with Lemon Grass and Chilli on Sweet and Sour Sauce*

Ingredients - four entrée portions

|   |                           |
|---|---------------------------|
| 300 g TenderBuff rump, chopped            | 100 g castor sugar        |
| 40 g butter                               | 100 mL white wine vinegar |
| 20 g lemon grass, finely chopped          | 20 mL tomato sauce        |
| 2 red chillies, finely sliced             | 10 g corn flour           |
| 50 g onions, finely chopped               | Water as required         |
| 100 g tomato paste                        | Salt and pepper to taste  |
| 12 cabbage leaves, blanched in salt water | 12 tooth picks            |

**Method**

Heat the butter in a frying pan, add chopped buffalo meat and cook until nicely browned. Add chillies, onions, lemon grass and sauté until onions are soft. Add 50 g of tomato paste and a small amount of water. Bring to the boil then remove from heat and let cool.

Cut the stalks off the cabbage leaves. Spoon buffalo mixture onto leaves, fold into parcels and secure with toothpicks. Heat parcels by steaming in a double boiler for about three minutes.

Prepare the sweet and sour sauce by combining sugar, vinegar, tomato sauce, remaining tomato paste and 200 mL of water in a saucepan. Bring to the boil. Mix corn flour with a small quantity of cold water and add to the saucepan stirring to avoid lumps. Simmer for about two minutes. Set aside and keep warm.

To serve pour spoonfuls of sweet and sour sauce onto a heated plate, place buffalo parcel in the middle and garnish with red and green capsicum strips.

(f) *Buffalo with Vegetables and Basil*

Ingredients - four entrée portions

|   |                               |
|---|-------------------------------|
| 300 g TenderBuff tenderloin (porterhouse) thinly sliced | 20 g tandoori paste           |
| 100 g bamboo shoots, sliced                             | 10 g garlic, crushed          |
| 50 g onion, sliced                                      | 2 red chillies, thinly sliced |
| 50 g carrot, sliced                                     | 50 mL oil                     |
| 2 spring onions, chopped                                | 20 mL fish sauce              |
|   | 30 g basil leaves, sliced     |

**Method**

Heat half the oil in a frying pan; add garlic, chillies and onions and sauté until just golden brown. Remove from frying pan.

Heat the remaining oil in a pan, add tandoori paste and cook for one minute. Add buffalo slices and fry until meat is cooked. Add the onion and chilli mixture plus bamboo shoots, carrots, spring onions, fish sauce and basil leaves. Sauté until all ingredients are hot. Serve accompanied by steamed rice or noodles.

(g) *Clear Buffalo Soup*

Ingredients - ten portions

|  |                               |
|--|-------------------------------|
| 2 kg buffalo shoulder (blade)                            | 2 onions cut in half          |
| 2 kg buffalo neck bones, or bones with some meat on them | 5 cloves                      |
| 3 large carrots, washed but not peeled                   | 10 peppercorns                |
| 3 parsnips, washed but not peeled                        | 4 beef stock cubes            |
| 4 stalks of celery                                       | 20 mL light soy sauce         |
| 4 bay leaves   | 150 g Parmesan cheese, grated |
| 1 bulb of garlic   | Salt and pepper to taste      |

**Method**

Place 2 kg of buffalo bones and 2 kg of buffalo shoulder in a large pot and cover with 4-5 litres of water. Add washed but not peeled carrots, parsnips, celery, onions and all other ingredients and bring to the boil. Gently simmer for about an hour. Remove the scum as it floats to the surface. Do not boil vigorously as this will make the broth cloudy and give an unappetising appearance. Remove carrots, celery, parsnips and onions and set aside. Continue to simmer the rest of the broth until the meat becomes soft, which could be another two hours or so.

Peel cooked vegetables and cut into bite-sized chunks.

Remove meat from the pot and strain broth. Cut meat into similar chunks as the vegetables and return cut meat and vegetables to the strained clear broth. Bring to boil again, and then serve in large soup bowls sprinkled with Parmesan cheese.

This dish can also be prepared with camel meat.

(h) *Buffalo Slices and Avocado on Pumpernickel*

Ingredients - four entrée portions

|                           |                                     |
|---------------------------|-------------------------------------|
| 300 g buffalo tenderloin  | 100 g butter                        |
| 30 mL oil                 | 100 g cream cheese                  |
| 10 g mustard              | 4 slices pumpernickel bread         |
| ½ ripe mild avocado       | Salt and pepper to taste            |
| 5 mL lime juice           | Piping bag with a large star nozzle |
| 100 g red capsicum, diced |                                     |

**Method**

Rub buffalo meat with mustard and season with salt and pepper. Heat oil in frying pan and seal tenderloin on all sides. Cook in the oven at 180°C until medium done. Set aside and let cool.

Combine avocado, cream cheese and lime-juice in a bowl and mix well. Add diced capsicum, salt and pepper and refrigerate.

Beat butter and parsley in a bowl until smooth and spread on pumpernickel slices. Cut buffalo meat into thin slices and place on bread. Fill avocado mixture into piping bag with large star nozzle. Pipe rosettes on top of buffalo slices.

Serve chilled.

(i) *Buffalo Sticks with Coriander Plum Sauce*

Ingredients - four entrée portions

|                           |                               |
|---------------------------|-------------------------------|
| 300 g lean buffalo mince  | 20 mL red wine, (claret)      |
| 100 g onion, finely diced | 100 mL spicy plum sauce       |
| 20 g garlic, crushed      | 5 g coriander leaves, chopped |
| 20 g curry powder         | Salt and pepper to taste      |
| 5 g mint, chopped         | 12 bamboo skewers             |
| 30 g parsley, chopped     |                               |

**Method**

Place buffalo mince, onions, garlic, curry powder, mint, parsley and red wine in a mixing bowl. Season with salt and pepper and mix well. Put equal amounts of mince around one end of each skewer in a sausage shape. Cook the buffalo sticks on a griller or BBQ until all sides are nicely browned.

To make the sauce, combine plum sauce, soy sauce and coriander in a bowl.

Serve buffalo sticks with the sauce separate. Garnish with sprigs of fresh herbs.

(j) *Buffalo Rump with Capsicums and Onion Mustard Sauce*

Ingredients - four main course portions

|   |                       |
|---|-----------------------|
| 700 g TenderBuff rump, sliced and trimmed to a round shape (150-200 g/person) | 50 mL red wine        |
| 3 capsicums, of different colours   | 10 g butter           |
| 30 mL olive oil   | 100 g onion, diced    |
| 50 mL demy glace (a powdered product can be used for home cooking)            | 20 g hot mustard      |
|   | 1 onion, medium sized |
|   | 20 mL cream           |

**Method**

Prepare the sauce by combining demy glace, red wine, mustard and onions in a sauce pan and simmer until reduced by half.

Pour sauce in a blender, add butter and, at low speed, blend until the sauce is smooth.

Cut capsicums into egg-shaped pieces. Blanch and set aside. Cut onion into rings.

Season the meat with salt and pepper and cook in a hot frying pan or BBQ until done as desired.

To assemble, place onion ring in the middle of the plate, pour sauce into it then pour a few drops of cream into the middle. Fan out with a toothpick to achieve desired eye-appeal. Arrange meat and capsicums around the onion ring. Serve with a side dish of seasonal vegetables.

(k) *Buffalo Chilli Con Carne*

|  |  |
|--|--|
| 500 g lean TenderBuff, coarsely minced (blade or chuck)      | 1 pinch oregano                                  |
| 50 mL oil  | 2 cinnamon sticks                                |
| 200 g onions, chopped  | 5 cloves, whole                                  |
| 15 g garlic, crushed   | 100 g red capsicum diced                         |
| 800 g whole peeled tomatoes (tinned tomatoes are acceptable) | 100 g green capsicum diced                       |
| 5 g Mexican chilli powder                                    | 500 g kidney beans (tinned beans are acceptable) |
| 5 g paprika  | 5 g parsley, chopped                             |
|  | Salt and pepper to taste                         |

**Method**

Heat oil in a suitable stewing pot and sauté onions until soft. Add buffalo mince and cook, stirring frequently to break up any lumps, for about five minutes. Add the rest of ingredients and simmer for about 40 minutes, stirring every few minutes to prevent meat from sticking to the bottom of the pan. Add kidney beans and diced red and green capsicums and simmer for a further 15 minutes. Adjust seasoning and sprinkle with parsley when serving.

**Note:** The Mexican chilli powder can be replaced with 1/3 fresh chillies and 2/3 cumin powder.

Some recipe suggestions from the CWA's Buffalo Cook Book



<sup>\*</sup>(a) *A Marinade for BBQ TenderBuff Steak*

|                        |                            |
|------------------------|----------------------------|
| 1 can of beer          | ¼ teaspoon powdered cloves |
| Grated rind of 1 lemon | ¼ cup of grated onion      |
| 2 tablespoons of salt  | Pinch of cayenne pepper    |
| ½ cup salad oil        | 2 ice cubes                |
| 2 tablespoons of sugar |                            |

**Method**

Mix a dash of beer with the lemon rind to make a smooth paste. Add the ice cubes, and then slowly add the oil, stirring continuously. Add the rest of the beer plus the remainder of the ingredients and place in a jar with a very tight fitting lid. Shake it up well and leave at room temperature for several hours before storing in the refrigerator. Soak meat in marinade for 12-24 hours prior to the BBQ.

<sup>\*</sup>(b) *Burmese Buff Curry*

|                            |                             |
|----------------------------|-----------------------------|
| 1 kg TenderBuff chuck      | 2 teaspoons of turmeric     |
| 4 tablespoons of oil       | ½ teaspoon of chilli powder |
| 4 onions chopped           | 1 cup of beef stock         |
| 4 cloves of garlic crushed | 2 teaspoons of soy sauce    |
| 1 teaspoon of ginger       | Salt                        |

**Method**

Cut TenderBuff into 3 x 0.5 cm strips. Heat oil, brown meat and add onions, garlic and ginger. Cook until golden brown. Add turmeric, chilli powder, beef stock and bring to the boil. Cover, reduce heat and simmer gently for one hour or until the meat is tender. Add soy sauce and salt to taste. Serve with fluffy white rice.

**FURTHER READING**

“Buffalo Cook Book” (1986) 2nd Edition. Publisher CWA Northern Territory Inc.

“The Best of TenderBuff” by Klemens Hedenig. Available from the NT Buffalo Industry Council.

Australian Water Buffalo – Selected Meat Cuts and Information – Available from the NT Buffalo Industry Council.

Please visit us at our website:

**[www.nt.gov.au/dpifm](http://www.nt.gov.au/dpifm)**

---

Department of Primary Industry, Fisheries and Mines  
© Northern Territory Government, 2006  
ISSN 0157-8243  
Serial No. 321  
Agdex No. 468/87

**Disclaimer:** While all care has been taken to ensure that information contained in this Agnote is true and correct at the time of publication, the Northern Territory of Australia gives no warranty or assurance, and makes no representation as to the accuracy of any information or advice contained in this publication, or that it is suitable for your intended use. No serious, business or investment decisions should be made in reliance on this information without obtaining independent/or professional advice in relation to your particular situation.

---

<sup>\*</sup> Buffalo Cook Book, Published by CWA of Northern Territory Inc. 2nd Edition 1986. Copies are still available from CWA Darwin. (DPIFM is grateful for permission to use these recipes).