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## Protocol for Masterbeef App

28/11/2019, 25/02/2020

### Certified Wagyu Beef (CWB)

Name	Tel	Email
Dr Michael Bradfield	082 857 0961	<a href="mailto:michael@wagyu.org.za">michael@wagyu.org.za</a>
Elandri de Bruyn	072 435 8229	<a href="mailto:cwb@wagyu.org.za">cwb@wagyu.org.za</a>

### Agency for Food Safety (AFS)

Name	Tel	Email
Louis Visagie	082 570 0176	<a href="mailto:louis.visagie@afsqa.org.za">louis.visagie@afsqa.org.za</a>

### IMQAS

Name	Tel	Email
Gerrie Oberholzer	083 625 5462	<a href="mailto:gerrie@imqas.co.za">gerrie@imqas.co.za</a>
Louis Ferreira	082 936 0853	<a href="mailto:clferreira43@gmail.com">clferreira43@gmail.com</a>

### Responsible personnel at abattoirs

Volksrust:	Johann Bouwer	084 455 5770	<a href="mailto:johann@vmco.co.za">johann@vmco.co.za</a>
Cavalier:	Mario Kleinsmit	082 447 3318	<a href="mailto:mariok@cavalier.co.za">mariok@cavalier.co.za</a>
Morgan Beef:	Douglas Morgan	083 306 3374	<a href="mailto:douglas@morganbeef.co.za">douglas@morganbeef.co.za</a>
Beefmaster:	Morne Lockem	082 920 7151	<a href="mailto:morne@beefmaster.co.za">morne@beefmaster.co.za</a>
KLK Upington:	Werner Raubenheimer	076 399 2444	<a href="mailto:werner@klk.co.za">werner@klk.co.za</a>

## 1 Fees (All fees are VAT excluded)

- AFS charge per km R4.50
- AFS day fee R150.00 per hour (to be divided by owners of the carcass)
- Masterbeef App fee \$6.00 per carcass

[ Owners of carcasses invoiced monthly]

## 2 Coordination

- AFS/IMQAS, together with CWB will coordinate the dates of scanning between the various abattoirs.
- CWB has dedicated the responsibility to Elandri de Bruyn
- Abattoirs/Breeders will request scan dates from the CWB office for the next month.
- AFS/IMQAS will invoice CWB at the end of each month for carcasses scanned during that month
- CWB will invoice the owner of the carcass by the end of the month after receiving the AFS/IMQAS invoice.

## 3 Grading of Carcasses

- Abattoir manger must ensure that the phone is fully charged before the day of scanning
- Carcasses can only be scanned 72h after slaughter, to allow enough time for the carcasses to cool down and reach the correct core temperature.
- Carcasses quartered if core temperature below 5 degrees
  - No higher than 10 degrees (Critical)
  - Preferably at the 5<sup>th</sup>/6<sup>th</sup> Rib
  - Grader must take a measurement of at least three carcasses spaced throughout the chiller, to calculate an average core temperature of the carcasses.
  - Carcasses can only be quartered after the grader has ensured that the core temp. is below 5°C
- Carcass image taken no later than three hours after quartering the side
  - If only quarters done, re-cut and clean
- Wait at least 30 min after quartering the **last carcass** for the meat to bloom
- Emphasis on creating a clean, flat, single cut surface
  - If any carcasses are not correctly quartered it must be rectified immediately.
- A Fat Depth measurement (in mm at the 5<sup>th</sup>/6<sup>th</sup> rib or 12<sup>th</sup>/13<sup>th</sup> rib) can also be taken.
- Producers are not permitted in the chiller and/or office while the carcasses are being imaged and the results are being compiled.
- The Abattoir will designate persons to help the grader with the handling of the carcasses in the chiller room.

## 4 Setting up the App and Scanning

**Note: Calibration to be done by Certified Wagyu Beef Staff per individual camera**

**Approved grader takes the image**

Scan left side  
for uploading.

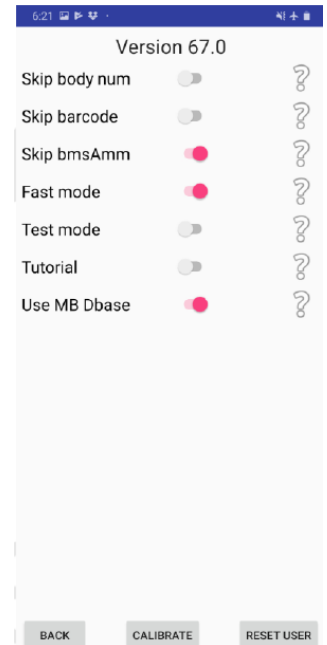
of carcass

- When scanning ensure that the muscle is clean of any fluids and bone saw dust. Use a knife or scrapper to clean the muscle.
- Ensure that the rib eye lays is parallel to the rectangle of the camera hood. The whole rib eye must be visible and in the middle of the camera screen when taking the image.

### 5.1 Settings

Only Skip bmsAmm, fastmode and Use MB Dbase should be on.

See picture below. If all the settings are entered correctly click on **back**.

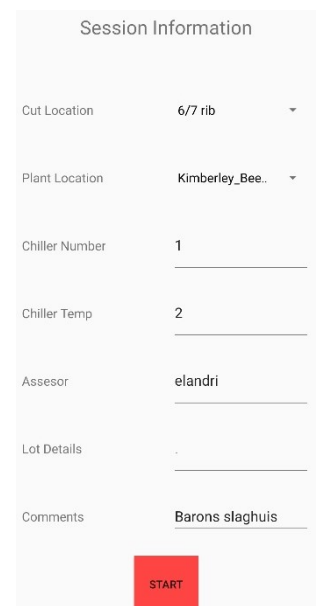


### 5.2 Session setup

Make sure to enter the details for cut location, plant location, chiller number, chiller temp and assessor.

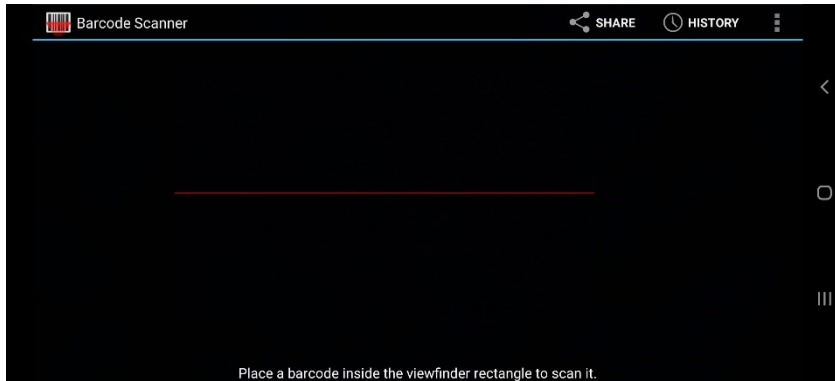
- Cut location: The site at which the quarter cut was made preferably at the 5<sup>th</sup>/6<sup>th</sup> rib.
- Plant Location: The abattoir at which the images are taken. All abattoirs in South Africa have been pre-loaded, select the correct abattoir from the list.
- Chiller number: The number of the chiller where the carcasses are being kept.
- Chiller Temp: The average temp of the chiller at time of scanning
- Assessor: The name of the person that is operating the app to scan.
- Comments: Here any other particulars that are important and may affect the results should be noted

Once all the information is captured, press on **start**.

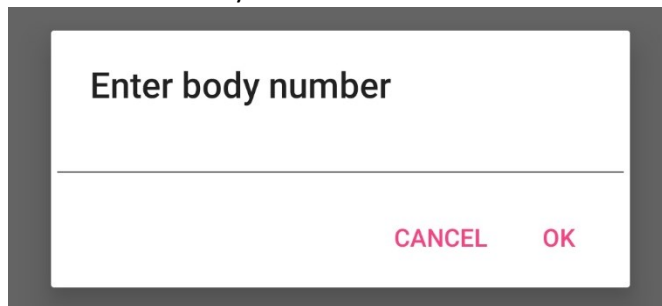


### 5.3 Store Images

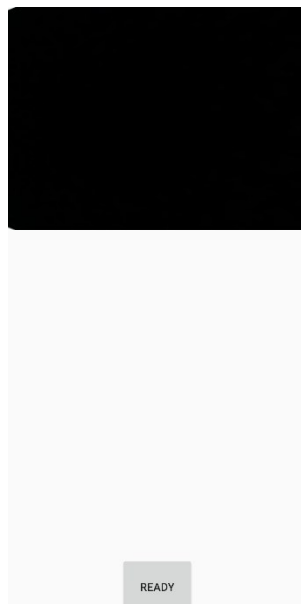
- The app will start with scanning the barcode of the carcass



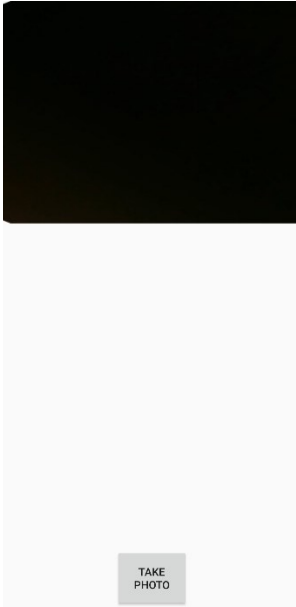
- It will ask for a body number to be entered. Once entered, press **ok**.



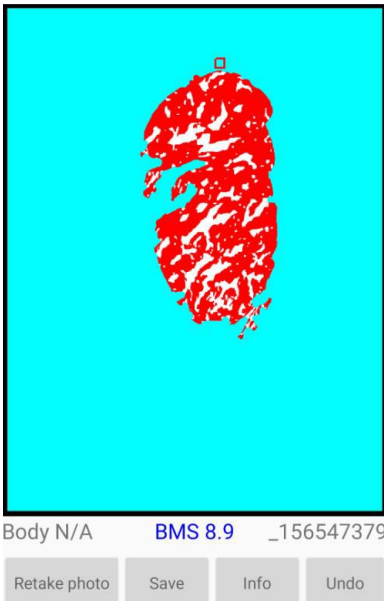
- Place the hood of the scanner directly over the rib eye area and press **ready**.



- A light will come on. Make sure that you are standing in front of the carcass and that the rib eye is in the middle of the picture. Press **take photo**.



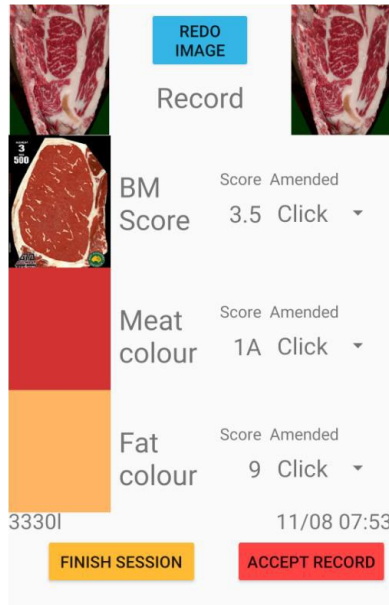
- When the photo is being taken, ensure that the phone is kept still. Once the photo is completed you can remove the phone from the carcass. Press **save**.



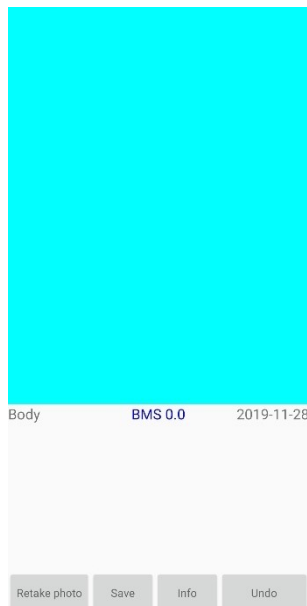
Repeat this process when taking the photo of the next carcass.

#### 5.4 Review Images (before uploading onto website)

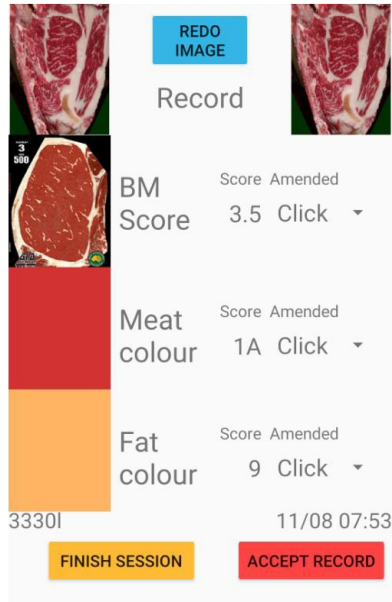
Here the images can be viewed one for one



- Look at the image and see if it was taken correctly. Also check to see that only the rib eye is being analysed in the photo.
- If the image is unclear, or does not show the rib eye are properly, the photo needs to be retaken. Click on **redo image** and **retake photo**. Once the photo has been retaken click on **save**.



- Go back to review images, if the image is correct, press on **accept record**.
- Once a record has been accepted it cannot be changed or edited on the phone.
- Click on finish session when all the images have been reviewed.



REDO IMAGE

Record

BM Score Score Amended 3.5 Click ▾

Meat colour Score Amended 1A Click ▾

Fat colour Score Amended 9 Click ▾

3330I 11/08 07:53

FINISH SESSION ACCEPT RECORD

## 5.5 Upload Images

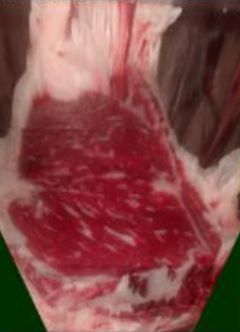







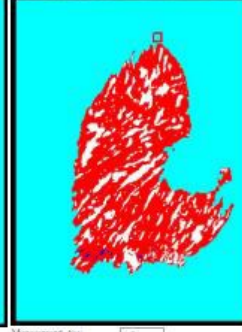

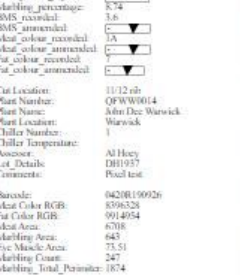
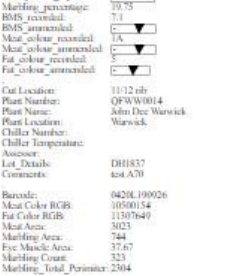
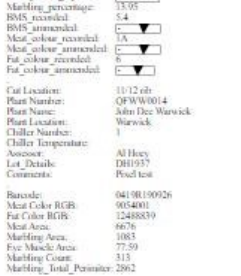
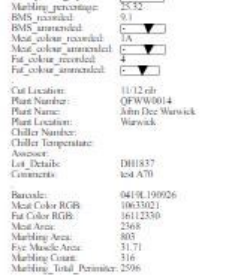
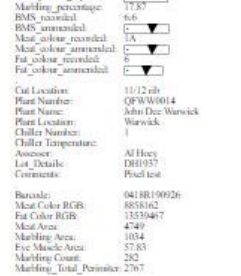
Before uploading ensure that you have reviewed and accepted every image.

- On the upload screen you will be prompted to sign in. Use the username and password as provided by the masterbeef team to the abattoir.
- Select **South African Wagyu Association** click **ok**.
- Click on the **upload** button on top of the screen.
- Make sure to **sign out** when all the images are uploaded.
- On your laptop go to the masterbeef website <https://beefassessment-website-as.azurewebsites.net/>. Sign in with the same credential as was used for the phone.
- In the top bar select: South African Wagyu Association and the date of scanning. Click **go**.



Sign out CSV South African Wagyu Association ▾ Sort date ▾ Dates 18/11/2019 to 18/11/2019 Plant all ▾ Body # go

- You will be able to view all the images that was uploaded on the selected date

Details file	Upload file	Thumbnail file	Details file	Upload file	Thumbnail file	Details file	Upload file	Thumbnail file	Details file	Upload file	Thumbnail file	Details file	Upload file	Thumbnail file										
File: QPWW0014_156954358_00420	Date taken: 27-09-2019 10:25:58	Date uploaded: 07-10-2019 16:20:33	User: strahalek	Body (from_barcode): 0420L	Body (user_entry): 420L	File: QPWW0014_156954357_00420	Date taken: 27-09-2019 10:25:07	Date uploaded: 01-10-2019 19:40:33	User: strahalek	Body (from_barcode): 0420L	Body (user_entry): 420L	File: QPWW0014_156954356_00419	Date taken: 27-09-2019 10:25:06	Date uploaded: 07-10-2019 16:20:33										
																								
Management_tag: <input type="checkbox"/> beef	Marbling_percentage: 5.94	BMS_recorded: 3.6	BMS_annotation: <input type="checkbox"/> C	Meat_colour_recorded: 1A	Meat_colour_annotation: <input type="checkbox"/> C	Fat_colour_recorded: 9	Fat_colour_annotation: <input type="checkbox"/> C	Cat Location: 11/12 rib	Plant Number: QPWW0014	Plant Name: John Dee Warwick	Plant Location: Warwick	Chiller Number: 1	Chiller Temperature: 1	Assessor: Al Hecy	Lot_Details: DH1937	Comments: Pseid test	Barcode: 0420L190926	Meat Color RGB: 8396328	Fat Color RGB: 9014054	Meat Area: 6708	Marbling Area: 643	Eye Muscle Area: 73.51	Marbling Count: 247	Marbling_Total_Percentage: 1874
Management_tag: <input type="checkbox"/> beef	Marbling_percentage: 7.75	BMS_recorded: 7.1	BMS_annotation: <input type="checkbox"/> C	Meat_colour_recorded: 1A	Meat_colour_annotation: <input type="checkbox"/> C	Fat_colour_recorded: 5	Fat_colour_annotation: <input type="checkbox"/> C	Cat Location: 11/12 rib	Plant Number: QPWW0014	Plant Name: John Dee Warwick	Plant Location: Warwick	Chiller Number: 1	Chiller Temperature: 1	Assessor: DH1837	Lot_Details: test A70	Comments:	Barcode: 0420L190926	Meat Color RGB: 10500154	Fat Color RGB: 11307649	Meat Area: 5023	Marbling Area: 744	Eye Muscle Area: 37.67	Marbling Count: 323	Marbling_Total_Percentage: 2504
Management_tag: <input type="checkbox"/> beef	Marbling_percentage: 35.05	BMS_recorded: 5.4	BMS_annotation: <input type="checkbox"/> C	Meat_colour_recorded: 1A	Meat_colour_annotation: <input type="checkbox"/> C	Fat_colour_recorded: 8	Fat_colour_annotation: <input type="checkbox"/> C	Cat Location: 11/12 rib	Plant Number: QPWW0014	Plant Name: John Dee Warwick	Plant Location: Warwick	Chiller Number: 1	Chiller Temperature: 1	Assessor: Al Hecy	Lot_Details: DH1937	Comments: Pseid test	Barcode: 0419L190926	Meat Color RGB: 9054001	Fat Color RGB: 12488839	Meat Area: 6676	Marbling Area: 1083	Eye Muscle Area: 77.59	Marbling Count: 313	Marbling_Total_Percentage: 2862
Management_tag: <input type="checkbox"/> beef	Marbling_percentage: 35.52	BMS_recorded: 9.1	BMS_annotation: <input type="checkbox"/> C	Meat_colour_recorded: 1A	Meat_colour_annotation: <input type="checkbox"/> C	Fat_colour_recorded: 4	Fat_colour_annotation: <input type="checkbox"/> C	Cat Location: 11/12 rib	Plant Number: QPWW0014	Plant Name: John Dee Warwick	Plant Location: Warwick	Chiller Number: 1	Chiller Temperature: 1	Assessor: DH1837	Lot_Details: test A70	Comments:	Barcode: 0419L190926	Meat Color RGB: 10633021	Fat Color RGB: 16112350	Meat Area: 2368	Marbling Area: 803	Eye Muscle Area: 31.71	Marbling Count: 316	Marbling_Total_Percentage: 2596
Management_tag: <input type="checkbox"/> beef	Marbling_percentage: 77.57	BMS_recorded: 6.6	BMS_annotation: <input type="checkbox"/> C	Meat_colour_recorded: 1A	Meat_colour_annotation: <input type="checkbox"/> C	Fat_colour_recorded: 6	Fat_colour_annotation: <input type="checkbox"/> C	Cat Location: 11/12 rib	Plant Number: QPWW0014	Plant Name: John Dee Warwick	Plant Location: Warwick	Chiller Number: 1	Chiller Temperature: 1	Assessor: Al Hecy	Lot_Details: DH1937	Comments: Pseid test	Barcode: 0419L190926	Meat Color RGB: 8858162	Fat Color RGB: 33579467	Meat Area: 4749	Marbling Area: 1034	Eye Muscle Area: 27.83	Marbling Count: 282	Marbling_Total_Percentage: 2767

- Click on the **CSV button** to download an excel sheet of the results. Save this sheet in the correct folder.



id	0000107R_1574065461_000301	0000107R_1574065363_000299	0000107R_1574065409_000300	0000107R_1574065161_000293
ts	18/11/2019 10:24	18/11/2019 10:22	18/11/2019 10:23	18/11/2019 10:19
uploadTime	10/12/2019 11:51	10/12/2019 11:51	10/12/2019 11:51	10/12/2019 11:51
user	Cavalier	Cavalier	Cavalier	Cavalier
uploadedBy	null	null	null	null
body				
bodyNum	301	299	300	293
identifier	null	null	null	null
marblingPerc	5.62	3.86	9.35	2.1
bms	2.7	2.2	3.8	1.4
bmsAmm			null	
meatColor	1A	1A	1A	1A
meatAmm	null	null	null	null
fatColor	4	4	4	4
fatAmm	null	null	null	null
cutLocation	11/12 rib	11/12 rib	11/12 rib	11/12 rib
plantLocation	107R	107R	107R	107R
plantName	Cavalier Abattoir	Cavalier Abattoir	Cavalier Abattoir	Cavalier Abattoir
plantTown	Cullinan	Cullinan	Cullinan	Cullinan
chillerNumber	1	1	1	1
chillerTemperature	2	2	2	2
assessor	elandri	elandri	elandri	elandri
lotDetails	null	null	null	null
comments	null	null	null	null
uploadedFrom	null	null	null	null
version	null	null	null	null
phoneModel	SM-A705FN	SM-A705FN	SM-A705FN	SM-A705FN
barCode	null	null	null	null
meatColorRGB	8328995	8656673	9117225	9380654
fatColorRGB	11966873	12691880	12229017	13152176
meatArea	6041	7238	7151	6601
marblingArea	360	291	738	142
eyeMuscleArea	64.01	75.29	78.89	67.43
marblingCount	141	177	242	87

- Folders on laptop arranged as follows:
  - Wagyu (Saved to Desktop)
  - Masterbeef Camera App
  - Abattoir name
  - Year and then Date of scanning in Abattoir folder
  - Save the Masterbeef CSV export

## 5 Flow of Images

The abattoir will designate a person that will help the grader with exporting the results from the Masterbeef website and compiling the results sheet.

### 5.1 Abattoir must link body number with complete ear tag number and RFID/DIMSA number;

Must include herd-year and sequential number for example **ABC190001 (Critical)**. The following also needs to be included as highlighted in yellow below:

- **Slaughter Date**: Date on which animals were slaughtered
- **RFID and DIMSA tags**: These alternate IDs are crucial for traceability and needs to be filled in.
- **Quarter Site**: The site at which the quarter cut was made preferably at the 5<sup>th</sup>/6<sup>th</sup> rib.
- **Carcass Owner**: Owner of the carcass on the day scanning took place



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- **Hot Carcass weight:** Weight of the carcass immediately after slaughter (**in kg; one decimal allowed**)
- **Fat Depth 12<sup>th</sup>/13<sup>th</sup> Rib (Optional):** The fat depth measured at the 12<sup>th</sup>/13<sup>th</sup> rib, this can be done with a ruler and must be recorded **in mm** (if available).

Copy and paste **Body no, DMp (%), DMs and DMa** from downloaded CSV file into the results sheet.


Taken at	Body no.	DMp (%)	DMf	DMa (cm2)	DMs	Slaughter Date	Animal ID ABC190001	RFID	DIMSAs tag	Quarter Site	Carcass Owner	Hot Carcass weight	Fat Depth (Optional)
2019-04-30 00					2	2019/04/26	RVK170051	982 126053866429		5/6	Cavalier Feeders	398.2	
2019-04-30 00					3	2019/04/26	RVK170108	982 126053866417		5/6	Cavalier Feeders	370	

Save the file in the same folder as the Masterbeef CSV export.

- 5.2 Grader emails CWB and abattoir above file and includes the date for example Carcass-data\_12062019
- 5.3 All carcass results must be verified by the CWB office before it can be sent out to producers
- 5.4 The abattoir will send the final results to the producers via email, as soon as it is received
- 5.5 All Wagyu carcasses must be stamped with CWB stamps
  - Stamp each quarter with the corresponding Marble Score
  - Cut a small piece of fat away so that the stamp stays on.

## 6 Office

- Office uses “results” sheet and creates abattoir/kill movement form and fates animal on system. Also uploads the Masterbeef results.
- Office sends invoice to carcass owner once a month for the image, Transport, day fee and admin fee
- Each abattoir has its own folder
- Each Scan date has its own folder within abattoir

Subject:	<b>Protocol for Masterbeef App</b>		
Approved by:	CWB Board	Revision:	20.1
Signature:		Effective Date:	13 Dec 2019
		Revision Date:	25 Feb 2020