



Formal and Informal Red Meat Industry in the Western Cape

10/10/2018

Hidden in Plain Sight: A Regional Inquiry into the Size, Scope and Socioeconomic Effects of the Western Cape's Formal and Informal Red Meat Industries

Industry Sector: Cattle And Small Stock

Research Focus Areas: Animal Health And Welfare; Animal Products, Quality And Safety, Nutritional Value And Preference; The Economics Of Red Meat Consumption And Production In South Africa

Research Institute: Agriculture Research Institute – Animal Production Institute

Researcher: Dr Nick Vink PhD (Agric)

The Research Team

Title	Initials	Surname	Highest Qualification
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Completion Date : 2018

Aims Of The Project

- 3.1 To determine and report the size and scope of the informal red meat industry as well as the informal industry's effects on food safety, animal health and welfare and food security with an initial focus on the Western Cape.
- 3.2 To determine and report the size and scope of the formal red meat industry as well as the formal industry's effects on food safety, animal welfare and food security with a primary focus on the Western Cape.
- 3.3 To create and test a combined quantitative and qualitative methodology for determining the size and scope of the red meat industry in South Africa with a primary emphasis on the informal sector, a secondary emphasis on the formal sector as well as recommendations for improving current levels of food safety, animal welfare and food security.

Executive Summary

Hidden In Plain Sight

The genesis of *Hidden in Plain Sight* was two previous studies of red meat marketing systems: one in a rural Municipality in the Western Cape that discovered an informal shadow industry operating alongside a formal system of abattoirs, supermarkets and independent butcheries; the other in the townships and informal settlements of Cape Town that described an informal marketing system filling a vacuum created by the abdication of the formal system of supermarkets and butcheries. Beyond the scope of both studies was an appreciation of the size and scope of the Province's informal systems of red meat production, processing and distribution. *Hidden in Plain Sight* attempts to determine size and scope of the Province's informal red meat industry, its effects on food security, food safety and animal health and welfare.

Informal livestock farmers pasturing cattle and sheep primarily on Municipal land as well as raising pigs in improvised piggeries furnish livestock for informal processing; i.e. outdoor slaughter and indoor butchery in unlicensed facilities such as home kitchens and food stands. One and two kilo 'value packs' are then sold from kitchen butcheries in rural communities. Braai stands located near taxi ranks, train stations and major intersection in the former townships of Khayelitsha, Gugulethu and Nyanga in the Cape Town Metropole receive live animals directly from informal producers located on City land surrounding these communities. The animals are slaughtered on the sidewalk in front the stands or in any other adjacent open space. The muscle meat is sliced into strips and braaiied, the heads are skinned, split and charred and the offal is piled on the counter for sale to hawkers or take-home consumers.

The informal system exists in both urban and rural areas to serve the 2.6 million low to very low income households in the Western Cape. In addition to low incomes many urban and rural households live in virtual 'food deserts' where, in the absence of transportation either public or private access to food sellers is at best difficult. Low to very low incomes and lack of access expose over half of the Province's households to food insecurity and place 29 percent at risk of hunger.

An expectation at the inception of this study was that size and scope of the informal system although unknown would rival the formal red meat system and would be sufficient to serve a significant percentage of the Province's food insecure households. Such was not the case. Survey data based on inspections of informal production sites throughout the Province, census and interview data from the Veterinary Service and the Farmer Support and Development programmes of the Western Cape Department of Agriculture and interviews with Municipal Social Development officials yield numbers of informal produced livestock clearly insufficient to serve a fraction of households at risk for hunger. Three recommendations are offered to increase the capacity of the informal industry to serve food insecure households: conduct a comprehensive inventory of public land suitable for informal production; establish an informal production, processing and distribution pilot project in each District Municipality; investigate existing parallel formal – informal marketing systems in Latin America; develop a prototype two tiered regulatory frame work to facilitate food security whilst ensuring food safety.

POPULAR ARTICLE

Magazine Article

Michael McCullough

When South African consumers walk into their local supermarket to shop for beef, lamb or pork they expect a fresh, high quality, attractively packaged, nutritious product and they get it. No need to worry about the safety of the product. South African cattle, sheep and pigs are given a through once over before they set foot in an abattoir. Any animal injured, unfit or suspected of disease is promptly rejected, condemned and disposed of. It's not a business decision, it's the law.

What supermarket shoppers are beginning to worry about is the possibility the meat they serve their family and friends could come from terrified, abused or injured animals. They want to know that the slaughter process is humane and animal suffering is minimised. That may sound like a contradiction in terms but it's not. Here's why:

- After arrival at the abattoir animals must be rested for at least an hour. The animals must calm and ready for inspection just before they are taken into the abattoir.
- After passing single file through a narrow corridor each animal is taken individually into a slaughter room and placed in a narrow box or a harness. This happens out of sight of the other animals to reduce stress on those queued up behind.
- The actual killing must be painless. Animals are stunned with a strong but not fatal electric shock or with a captive bolt pistol that delivers a sharp blow to the animal's forehead.

- While the animal is unconscious both the arteries and veins in the neck must be severed quickly and accurately. Contrary to the movies where the victim drops dead just after his throat is cut; if one or more veins or arteries are missed the animal may take from a minute to five minutes to die. If the stun wears off before enough blood is lost to shut down the brain the animal can experience pain.
- Stunning and wielding the knife is hard, skilled and dangerous work. Humane slaughter depends on workers who are alert and careful. Tired operators may become careless or insensitive to animals' welfare therefore abattoirs insure their operators take regular rest periods to maintain their skills.

The animal's carcass is then moved to a high ceilinged room and hoisted head down to finish the bleeding process. The carcass is now ready for butchery. For consumers preferring kosher or halal meat the procedure is slightly different. For kosher slaughter no stunning is allowed but to minimise suffering the arteries, veins, vagus nerve, trachea and oesophagus are severed in a single quick sweep of a very sharp knife. Halal abattoirs may elect to stun the animal. Properly done the animal is unconscious in three seconds because severing the vagus nerve is like shutting down the body's neurological switchboard. Flip the switch and the lights go out.

One thing consumers shopping at their neighbourhood supermarket or butchery don't want to worry about is whether the chops and steaks they're buying are safe to eat. Should they? After all nobody wants to have friends and family or even worse, their boss over for a braai and find out later that everyone wound up at the clinic with gastric 'distress' or worse. This threat is all but completely short-circuited by post slaughter meat inspections, cold chain management and strict hygiene practices from the abattoir to the wholesaler to your butcher to your shopping cart. Here's how it works:

- After the carcass has bled out, the head and hide are removed taking care to make sure the hair side of the hide doesn't touch the meat. After all the animal has never seen a shower stall so the hide is pretty grimy. For this reason anything that touches the hide shouldn't touch the meat such as dirty hands, in in the low income housing areas next to most country towns and in densely populated urban communities like Khayelitsha in Cape Town implements, dirty hands or soiled protective clothing.
- Organs like the gut and the gall bladder contain seriously infectious bacteria like salmonella so the viscera must come out intact (the viscera is the sack that contains digestive tract). If it splits like a cheap trash bag on the way out everything you don't want to touch the meat goes everywhere including all over the carcass. Assuming everything comes out as planned it's time for final butchering and trimming.
- The carcasses are halved, the spines removed, all the other inedible bits and pieces as well as any contaminated meat is cut out and discarded. The carcass is washed and chilled. The slaughter and butchering processes are done.

From here to your grill is just a matter of maintaining the cold chain – keeping the carcass clean and chilled — until it passes through the wholesaler's cold storage on its way to your neighbourhood supermarket or butchery. The carcass is then cut into meal sized portions, wrapped, marked, priced and put in the display case. Done and dusted.

Just as every coin has two sides so does every industry. The meat industry is no exception. The formal, visible side of the industry serves the middle and upper classes and the informal, mostly invisible side serves everyone else.

When low to very low income consumers shop for beef, lamb or pork do they expect high quality and fancy packaging? Do their questions about nutrition go much further than *Will it satisfy my family's hunger or not?* Does price matter more to this consumer than where the animal came from, what condition it was in and how did it die? It's safe to say that putting enough affordable on the table comes first; nothing else really counts.

For these reasons a growing number of South Africans are turning away from supermarkets and butcheries to buy meat produced and processed in their own communities. Why are a growing number of consumers in low income urban communities bypassing abattoirs, supermarkets and butcheries?

Until recently not much was known about the informal red meat industry in the rural Western Cape. It was not completely invisible but rather operated in the shadows just out of sight of most supermarket and butchery shoppers. Informal stock producers who supply this industry aren't usually landowners and depend heavily on leased Municipal property adjacent to low income housing areas and shanty towns. Cattle and sheep producers graze their animals where they can find grass and water. However pig

producers must confine their animals to keep them from roaming. They build pens from scraps of lumber, sheet metal or other discarded building materials. Pig can't be kept just anywhere; they need a source of water for mud to wallow in during the warm months (they don't sweat enough to keep cool). The smell of an informal pig kraal is unforgettable so most are located away from housing. Although neighbours don't seem to mind cows or sheep wandering through the community they usually draw the line at somebody else's pig rooting in their garden.

When an informal producer is ready to kill a pig, for example he or she spreads the word and takes orders. When it comes time to slaughter the producer recruits several volunteers; puts a barrel or large pot of water to boil on a wood fire and brings the pig forth. The pig is stunned by one or more blows between the eyes with a heavy hammer. A long sharp knife is inserted to the hilt just above the breastbone, twisted vigorously and pulled out. If all goes well (and it sometimes doesn't) the pig will bleed out rapidly. Unfortunately most informal sites don't have a convenient tree to hoist the pig so that it bleeds out completely. It's often left on the ground to ooze blood until the time seems right to dip the carcass into the hot water to loosen the hair and underlying membrane. After the hair is scraped off down to the white skin it's time to remove the head, the viscera and the rest of the internal organs. The pig should be hung for a day and allowed to cool. In practice this seldom happens. A carcass hanging from a tree overnight is likely to attract unwanted attention from the authorities. So the carcass is immediately butchered into saleable portions, refrigerated or frozen if possible and sold to local consumers. The helpers are usually rewarded with a share of the meat, the head and the offal.

The routine for cattle and sheep is similar except for the extra volunteers needed to handle a 150 kg cow carcass. Cow hides are removed with a knife and sheep skins are pulled off by hand. Unlike a pig no boiling and scraping is necessary. Contamination from faeces and urine is hard to avoid and accidents often occur when the processing crew is tugging the heavy, slippery viscera out of the gut cavity not to mention the near certainty of hair and dirt on the meat. The carcass is usually rinsed with water carried to the slaughter site in buckets. Given the rough and tumble nature of informal slaughter it's surprising that reported cases of food poisoning from informally sourced red meat are so rare as to be non-existent.

In Khayelitsha, a large densely populated suburb of Cape Town the informal system is not only out of the shadows it's out loud and proud. Next to every train station, taxi rank and surrounding every major street intersection sidewalk braai stands do a thriving business in grilled beef, pork and mutton. Tens of thousands of commuters stop by these stands every day to pick up a takeaway meal on the way to and from work. Think of these stands as fast food outlets for the black urban working class. Just like the 'McWhatevers' in other neighbourhoods braai stands offer accessible and affordable (but not necessarily inexpensive) meat to consumers without the means or time to buy meat fresh, take it home, refrigerate it and cook it later. The big difference between fast food outlets in neighbourhoods like Khayelitsha and outlets in other less crowded and more affluent neighbourhoods is how the meat gets there and what happens when it arrives.

Live animals are brought in from surrounding communities and slaughtered on sidewalks in front of the stands, alleys behind the stands or any unoccupied space. A source of water to rinse the carcasses is strictly optional. The muscle meat is sliced into strips and immediately grilled. The heads are skinned or scraped, split and charred for serving. The offal is piled on tables and sold to customers for home consumption.

To outsiders the scene is a bloody, chaotic and cruel public health disaster. Are there issues with quality? Yes. Nutrition? Absolutely. Packaging? Of course. Safety? Afraid so. Access? No. Affordability? No. To Khayelitsha residents braai stands are a local informal industry that meets their community's needs because the formal industry is either unwilling or unable to do so.

So which consumer model makes will prevail? The supermarket model that creates expectations of quality, safety and nutrition wrapped up in attractive packaging but comes at a high price? Or the braai stand/informal butchery next door that makes up for little or no packaging, no guarantees of quality, safety or nutrition but delivers affordable prices and accessibility?

For the foreseeable future the answer is both. Consumers who are willing and able to pay a price premium for the value added by abattoirs, wholesalers and supermarkets in exchange for guarantees of quality, safety and nutrition will continue to do so because they can. Consumers who lack the means to pay for those kinds of guarantees and who must take their chances in return for accessible and affordable meat will continue to do so because they must.

Please contact the Primary Researcher if you need a copy of the comprehensive report of this project – Dr Nick Vink on nv@sun.ac.za

- Animal Health and Welfare, Animal Products, Cattle and Small Stock, Quality and Value-adding, Red Meat Consumption
- 📄 2018, Paper, US, Vink
- < Discovery of single nucleotide polymorphisms
- > Does short duration grazing work in grasslands?

DEADLINES for RESEARCHERS 2021

Proposals for 2021: TBC

Progress reports: 28 Jan 21

Final reports: 29 Jan 21 Final includes comprehensive report and popular article

COMMITTEE MEETINGS for 2021

RMRDSA CSS Planning - TBC

Project Committee - TBC

Pork Planning - TBC



Calendar

< Apr 2021 >						
Sun	Mon	Tue	Wed	Tur	Fri	Sat
				1	2	3

4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

PORK Priority Areas

Cattle & Small Stock Programmes

1 Sustainable natural resource utilisation

2 Improvement of Livestock production and forage

3 Management of agricultural risk to create a resilient Red Meat sector

4 Sustainable health and welfare for the Red Meat sector

5 Enhancement of production and processing of Animal Products

6 Consumer and market development of the Red Meat sector

7 Commercialisation of the emerging sector

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