Teys program delivers on many levels

THE presence of Teys-branded, Meat Standards Australia-graded steaks at Brisbane's Norman Hotel illustrates how adoption of MSA has broadened the market reach for the nation's second-largest meat processor.

With a capacity for 700 patrons at a single sitting, the Norman is one of Australia's largest and most popular hotel steakhouses.
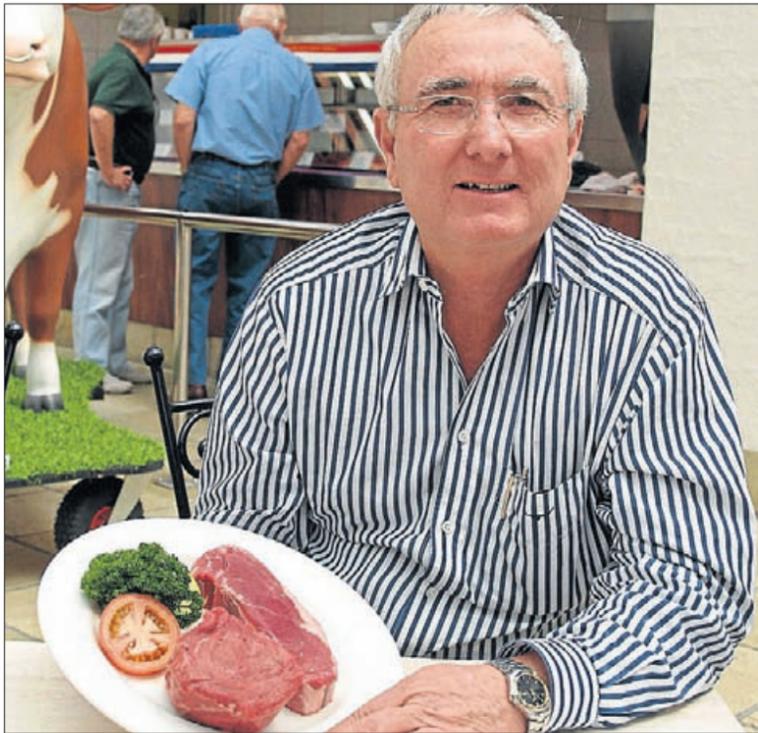
General manager Michael Fallon (pictured) said when the current owner, Adelaide-based Independent Pub Group, bought the hotel late last year, it went looking for a supplier of reliable quality MSA grilling cuts. IPG operates 21 hotels, including seven in Queensland, of which the Norman is considered its 'flagship'.

"We were looking for the combination of consistency and quality that we knew MSA would deliver, at a realistic price," Mr Fallon said.

Around the same time IPG took over the Norman Hotel, Teys was expanding its own MSA program to encompass all four company plants at Beenleigh, Biloela, Rockhampton and Naracoorte.

A deal was struck in early January this year for the supply of a range of portion-controlled grain and grassfed grilling cuts, all MSA-backed, delivered through Teys' Food Service division.

Over the past 12 months, Teys' grassfed MSA programs have in fact grown to a point where they now represent larger turnover than the company's equivalent grainfed MSA business. Teys produces grainfed MSA out of Naracoorte, Beenleigh and Lakes Creek, and grassfed at Biloela. All of the output is from milk and two-tooth animals, with a series of brands used to provide identity behind each category.

The company's growth in overall MSA throughput had been "huge" over the past six months, general manager livestock, Geoff Teys, said.

"More and more producers are getting behind the program, because they understand it is relatively easy to comply with," he said.

He used the example of a small-scale producer near Ballarat who "ticks all the pathways boxes".

His composite breed animals, processed at Naracoorte 200km away, regularly achieve 98pc compliance and only fall into the elite boning groups 1 and 2.

Teys Brothers first started trial-grading cattle for MSA as far back as 2002, but engaged at a commercial level from early 2008. Asked why it had not stepped into the program earlier, Mr Teys said there were several factors involved.

"Firstly, we had some concerns about continuity of livestock supply at the time, as there were large areas suffering drought in the preceding years. Another factor was the introduction of company grading, allowing us to efficiently grade our MSA cattle within our own operations under a credible, closely monitored process."

In order to embrace MSA in a company-wide sense, there was also the need for extensive modifications within the plants, involving major investment in upgrading chillers and other infrastructure.

"It's fair to say that the whole movement towards working under the MSA process is not only improving the product going into our MSA cartons – it's improving all of our meat," Mr Teys said.

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"A lot of the MSA process is about common sense – receiving cattle that have not been stressed, and handling them better through the chain.

"A few years from now, it's conceivable that MSA will be the standard for all better quality cattle processed in Australia."

Australia's top 12 MSA processors*

Processor	Brand names	Location	Annual MSA Grading
Australian Country Choice**	Coles	Cannon Hill	200,000
Teys Brothers	Teys Black Angus, Teys Gold	Biloela, N'coorte, Beenleigh, Rockhampton	190,510
Cargill	Riverine, CAAB	Wagga	100,000
Stanbroke Beef	1824, Diamantina	Grantham	60,000 (est) (1824 portion 25K)
Greenham	Cape Grim, Greenham Natural	Smithton, Tas	Not disclosed
Harvey	Harvey Beef	WA	54,800
Nolan Meats	Nolan's Private Selection	Nolan's Gympie	50,500
Swift Australia	Swift Premium King Island Friboi Tasman Premium	Townsville, Dinmore King Island Dinmore Longford	45,000
WMP Margaret River	Elite, Margaret River Fresh	Cowaramup WA	41,000
Northern Co-op Meat Co	Barcoo, Atron, Lee Pratt	Casino	40,000
Rockdale	Coles, Rockdale	Yanco	40,000 (est)
Dardanup Butchering Co	Tender Ridge, Quinn's Beef	Bunbury WA	30,000

* Some figures based on industry estimates
** ACC grades all cattle under MSA principles, but the product is not retailed by Coles Supermarkets identified as an MSA product, for commercial reasons.

tests become MSA's central pillar

supplied by major retailers under their superior quality categories. Of 10 groups tested, eight failed to meet the 3-star pathway standard, indicating the challenge ahead.

"Soon, other pathways were explored: How about 50pc Bos Indicus with tenderstretch and 28 days ageing? The test process would be repeated and measured against the standard. This triggered a lot of useful testing with a great deal of knowledge gained about tenderstretch, ageing, electrical stimulation and chilling all being put to the consumer test," Mr Polkinghorne said.

While much of the science was known, the consumer relationship provided new insights and understanding of the mechanisms, as well as quantifying the impact.

A level of success was achieved under the pathways approach when a single grilled striploin result was the measure. A sufficiently tight set of pathway parameters could be used to deliver an acceptable level of consumer satisfaction.

A major problem, however, was that as the pathway criteria were strengthened to achieve acceptable levels of consumer guarantee, many rejected cuts actually performed well. But conversely, if criteria were relaxed to achieve an acceptable level of inclusion, the failure rate became unacceptable.

The reason was that individual inputs inter-reacted so that a minimal failure in marbling level might be offset by lower ossification or longer cut ageing, for example.

To address these issues, multiple alternative pathways were devised and tested – each delivering a common designated quality result.

This became difficult to manage, however, and as individual cut and cooking method testing commenced, it became unworkable due to the countless possible combinations and their different outcomes at the cut level.

Researchers began asking questions about other cuts and other cooking methods in order to extend grading to more of the carcase.

A major headache arose when it was proved that there was little relativity between cuts within the same carcase. Whereas conventional grading assigned a grade to a whole carcase, trial results proved conclusively that this could not deliver an acceptable consumer result.

The inherent assumption that if something like a USDA grade was assigned to the striploin, then other cuts could be accurately estimated from it, proved false.

Different characteristics including sex, weight, ossification, breed, carcase hanging method, ageing time and other criteria could affect these relationships between muscles.

Tenderstretch carcase hanging, for example, had a big effect on some muscles and none on others.

Ageing effects differ between muscles, as does the influence of marbling and ossification.

This does not mean that each muscle needs to be individually assessed in a grading process, but rather that a single set of carcase-based inputs – such as carcase weight, sex and marbling, need to be applied with differential weightings for each muscle. Fortunately, this is not difficult within a computerised system.

"MSA remains the only grading system in the world that attempts to grade on the basis of a cooked consumer-sized beef portion or muscle, rather than the carcase as a single unit. It is probably no coincidence that MSA is also the only system in which grade standards are set by consumer testing," Mr Polkinghorne said.

A second critical foundation of the MSA program has proved to be the compilation of a single database incorporating all results, rather than holding individual trial results separately.

The MSA database currently contains more than 50,000 cuts, with all available associated data held in 140 columns for each. This provides a powerful tool from which relationships can be established from a consumer-down perspective.

Consumer scores are used to establish the MQ4 weightings and grade cut-offs for each cut. All potential grading inputs are then considered and combined where useful to predict the observed MQ4.

"Use of this principle led to the third central pillar of MSA – the MSA grading model. This was the real light-bulb moment for MSA," Mr Polkinghorne said.

"By estimating the MQ4 score for each muscle and cooking method combination, the individual inputs could be handled differently and interactively.

"Rather than using the pathway approach of having to meet a series of rigid parameters, a high performance in one attribute could offset a lower result in another.

"The complexity of managing an increasing number of alternative pathways, most likely specific to individual cuts, could be replaced by a single interactive model."

Importantly accuracy could be improved while false rejections could be reduced; most of the acceptable product was graded and most of the unsatisfactory product rejected. From that point forward MSA could become a commercial system.

There has been continual refinement of the first 'very basic' MSA model developed in 1998, with new releases every few years improving its scope and accuracy.

According to Mr Polkinghorne, the key to MSA's success has been acceptance of the consumer as the judge, without fear or favour.

While this had created considerable angst at different times from various interest groups, it had delivered a system which works, without compromise.

Timeline

June 2001 — Program moves from independent to company-based grading; Brisbane hotel MSA licence holder fined $20,000 for misdescription

Teys Brothers commences MSA grading trial

Aug 2002 — Evidence of commercially significant premiums emerging for MSA meat and livestock

2004 — National grading throughput reaches 500,000 head/year

2007 — MLA announces intention to roll-out MSA program into export markets, called EQA

EATING QUALITY ASSURED AUSTRALIAN BEEF

2008 — Nation's largest processor, Swift Australia starts MSA grading, boosting throughput.

Nov 2009 — MSA-licensed plants grade one million head in a calendar year for the first time. Program chalks-up 10 years of operations.

1M head