

Boar Taint Vaccine: Australian Pork Industry Position



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This presentation

- Ø Australian pork industry overview
- Ø Entire male pig production issues
- Ø Improvac R&D
- Ø Australian pork industry position

Industry overview

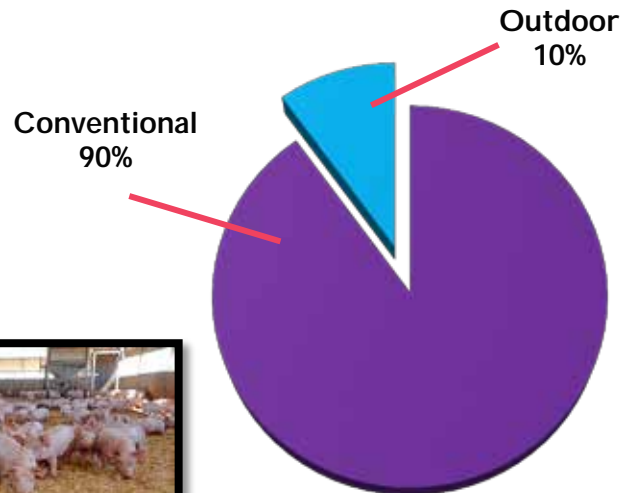
	2008/09	2009/10	2010/11	2011/12
Number of Sows (000's)	241	245	263	266
Slaughter pigs (M)	4.4	4.6	4.7	4.8

2011/12:

Ø ~1,600 Producers

Ø 400 producers ~ 92% production

Ø Entire male pig production system





Australian Pork Limited

Peak national representative body for Australian pork producers.

Vision

A competitive, responsible and sustainable Australian pork industry.

Why take a position on Improvac[®]

Why is Australian Pork Limited (APL);

- Ø Getting involved in the debate to use Improvac[®] or not?
- Ø Why does APL need a position on a commercial product?

Valid questions?

- Øabsolutely!
- Ø ~50% of entire male pigs are vaccinated
 - Ø 4 months ago this was <30%

Retailer strategy impacting industry strategy



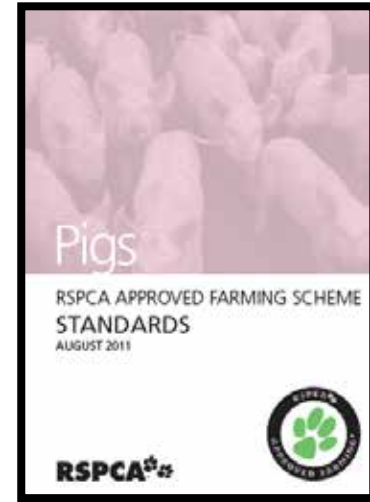
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Welfare issues: Avoid this on farm



Welfare based approval



Boar taint vaccine permitted by RSPCA Australia

Castration

- 5.2 Physical (surgical) castration is not permitted.
- 5.3 Where the risk of 'boar taint' is high, immunological castration³ is permitted.

Entire male pigs: Socio-sexual behaviour

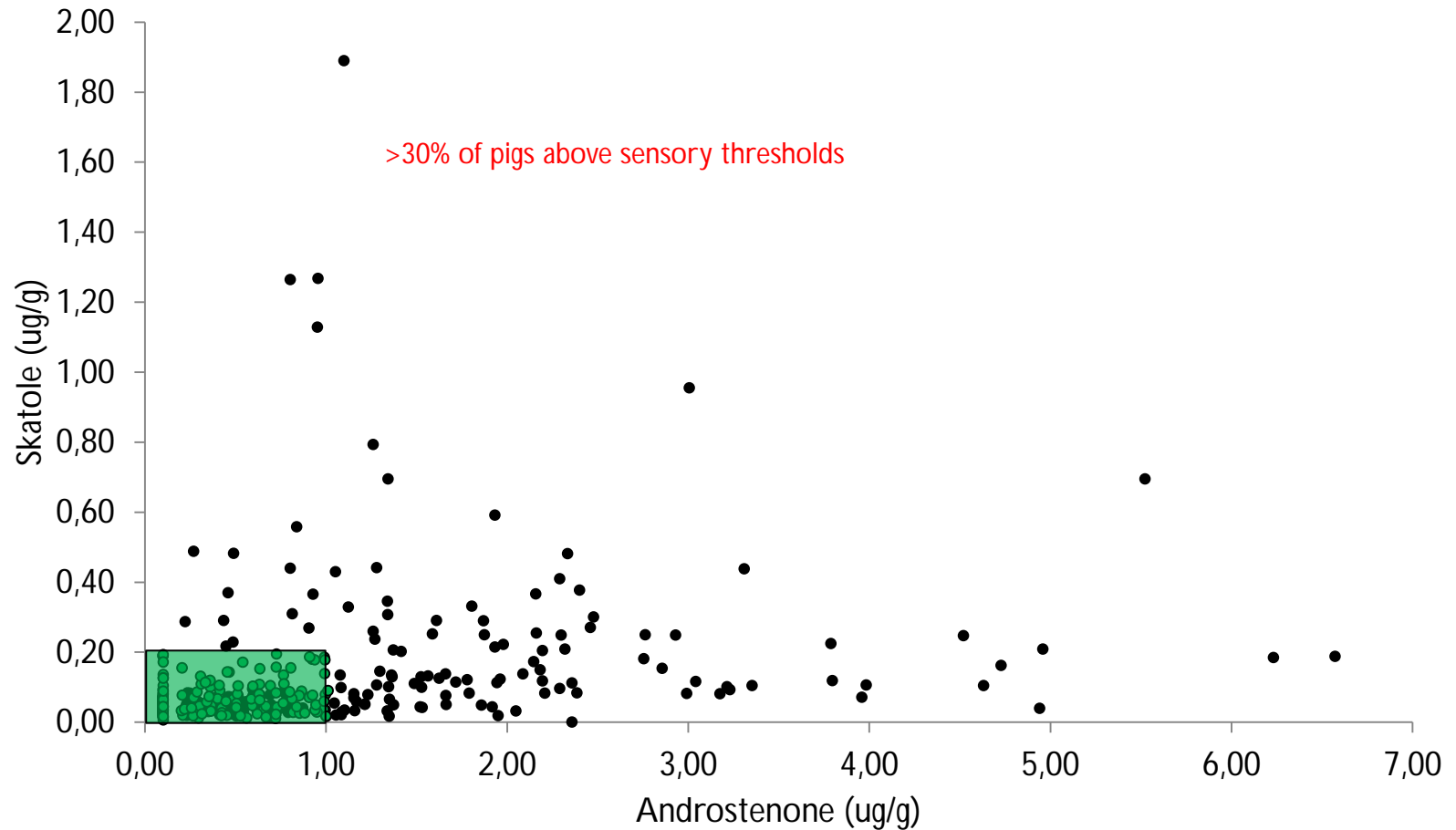


And then there is boar taint...

What is boar taint?



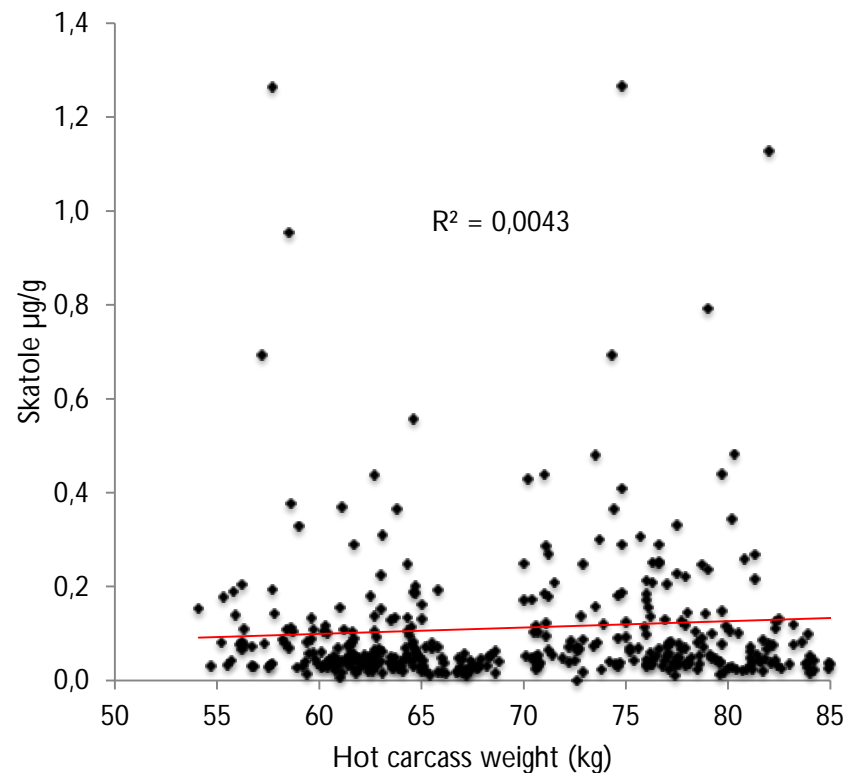
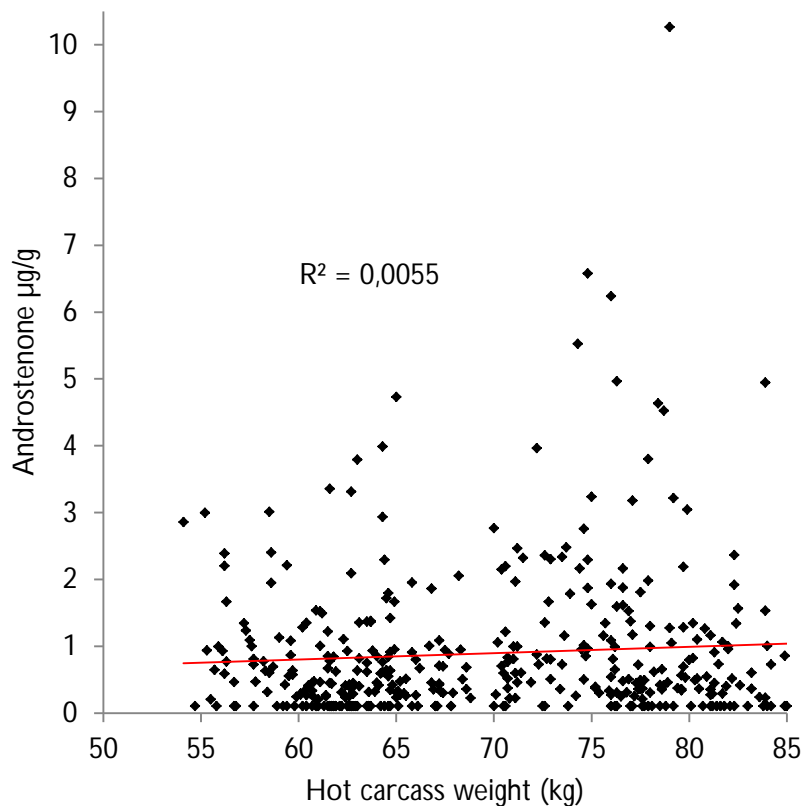
High incidence of boar taint (2011)



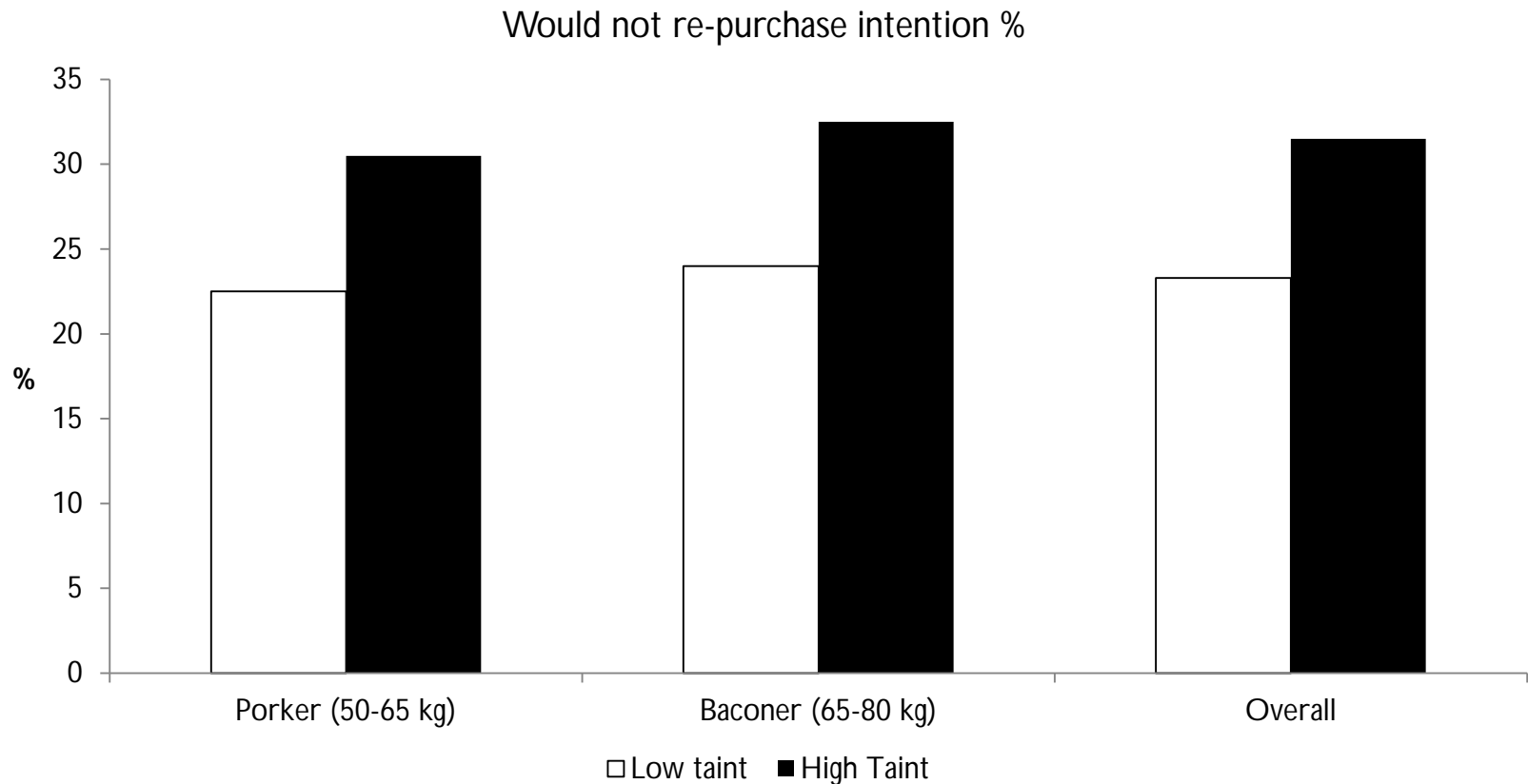
(D'Souza et al., 2011)

Poor correlation between boar taint risk and carcass weight

($R^2 < 0.005$)



Entire male pork has lower consumer acceptance

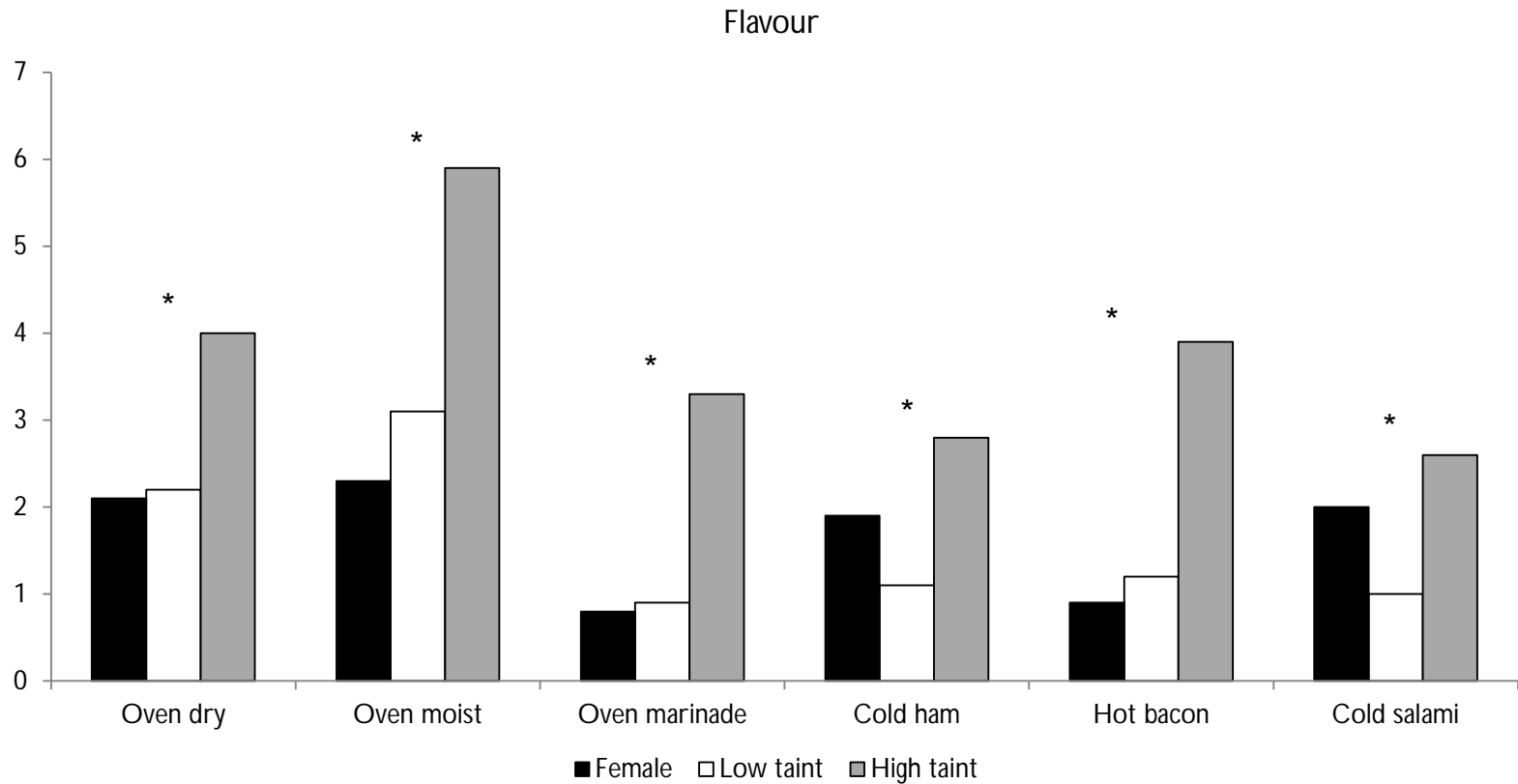


(D'Souza et al. (Unpublished); Pork CRC Final Report (2013) 3Z-110)

Consumer sensory acceptance: Fail rates

	Quality grade score					Fail rate
	1	2	3	4	5	(% <3)
Entire males	4.1	18.9	37.4	28.9	10.6	23.0
Females	2.1	16.7	36.8	31.8	12.3	19.1
Surgical castrates	3.8	13.8	38.8	27.5	16.0	17.7
<hr/>						
	Re-purchase intention score					Would not
	1	2	3	4	5	purchase(%<3)
Entire males	9.1	19.6	24.2	26.5	20.6	28.7
Females	6.4	17.2	24.4	30.1	21.7	23.6
Surgical castrates	8.1	15.4	24.5	26.6	25.5	23.5

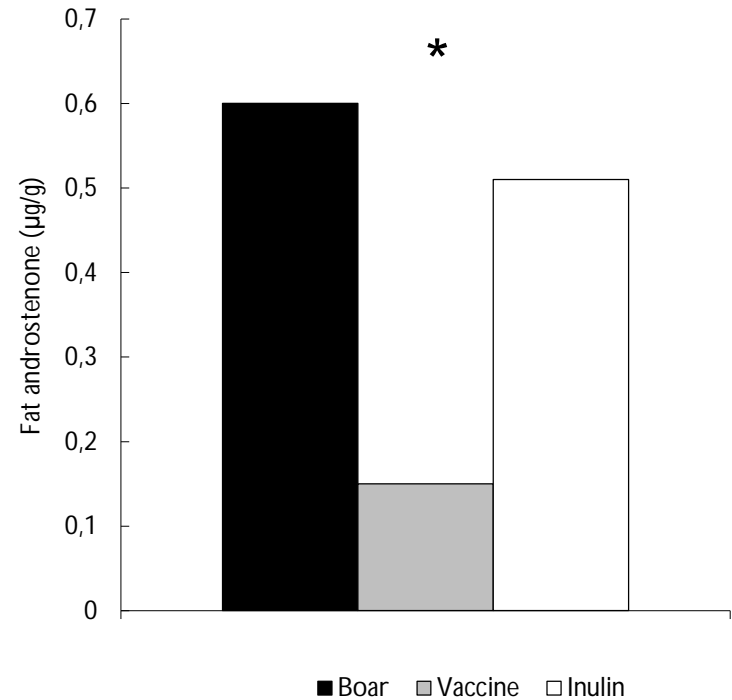
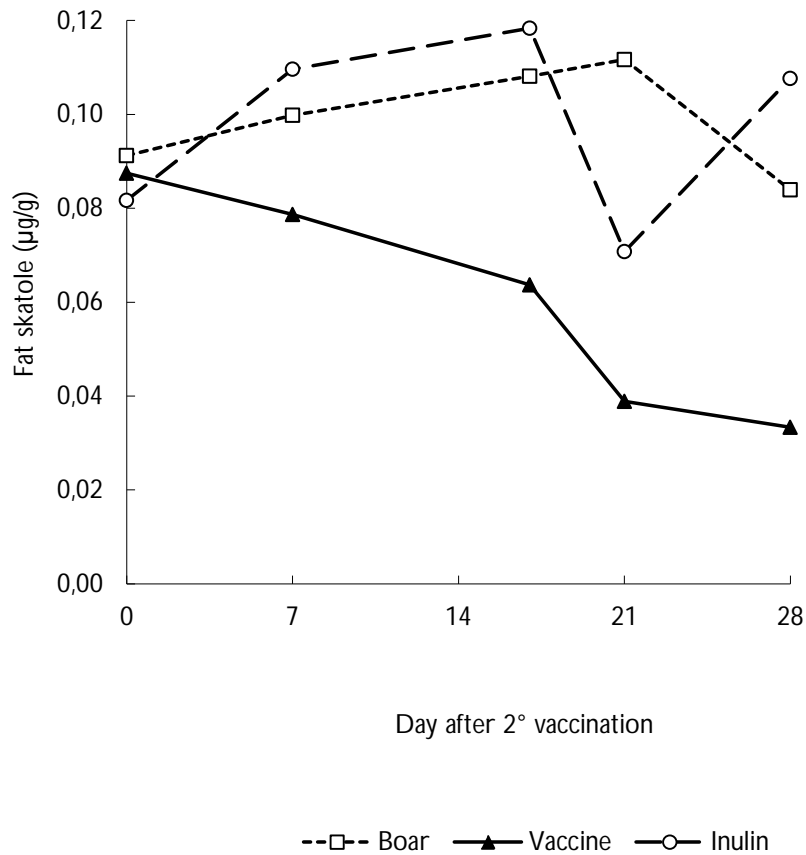
Processing does not mask boar taint



Trained panel: 0 = Absent; 10 = Strong
* $P < 0.05$

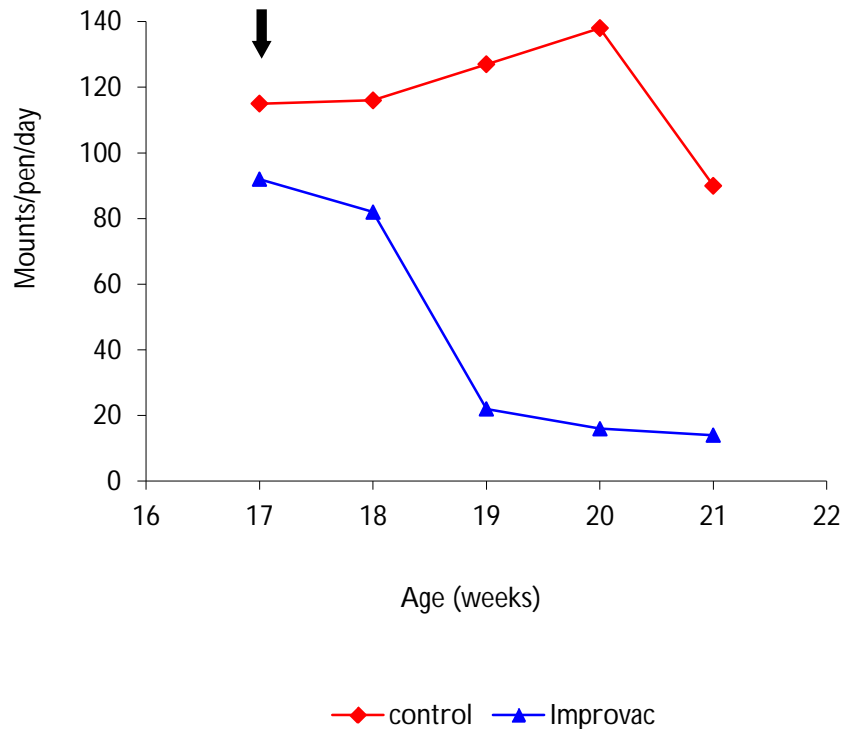
(McCauley et al., 1997)

Dietary factors do not eliminate boar taint

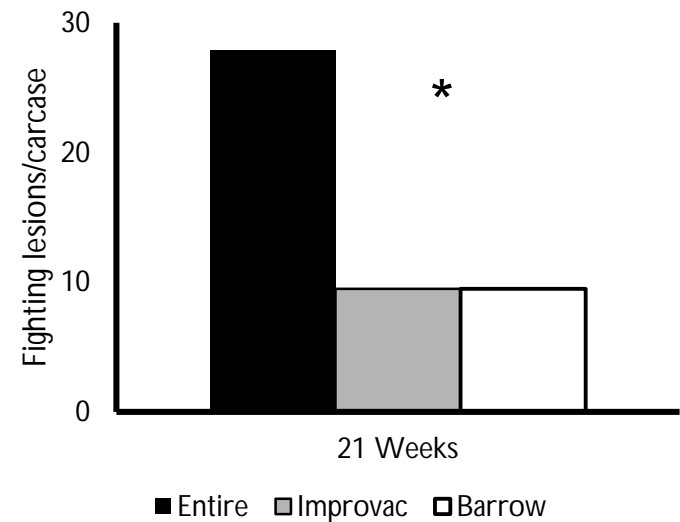


(Dunshea & McCauley, 2009)

Improvac[®] reduces aggression



Cronin et al. (2003)

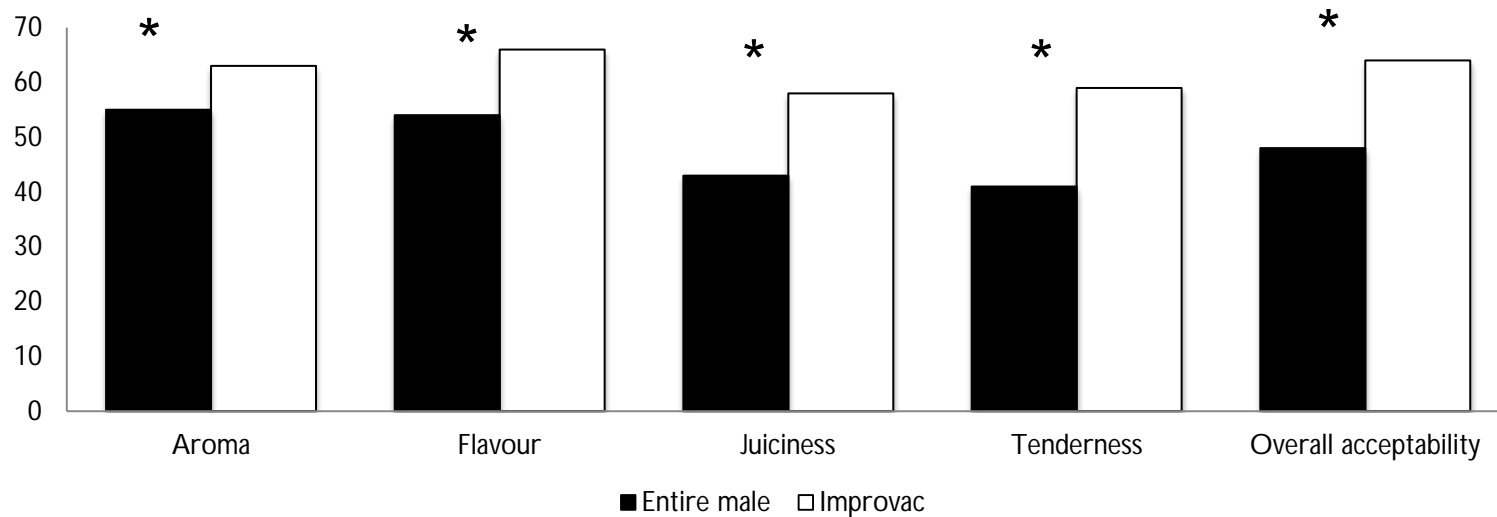


Dunshea et al. (2011)

Note:

General observations indicate that there is an increase in leg damage in entire male pigs

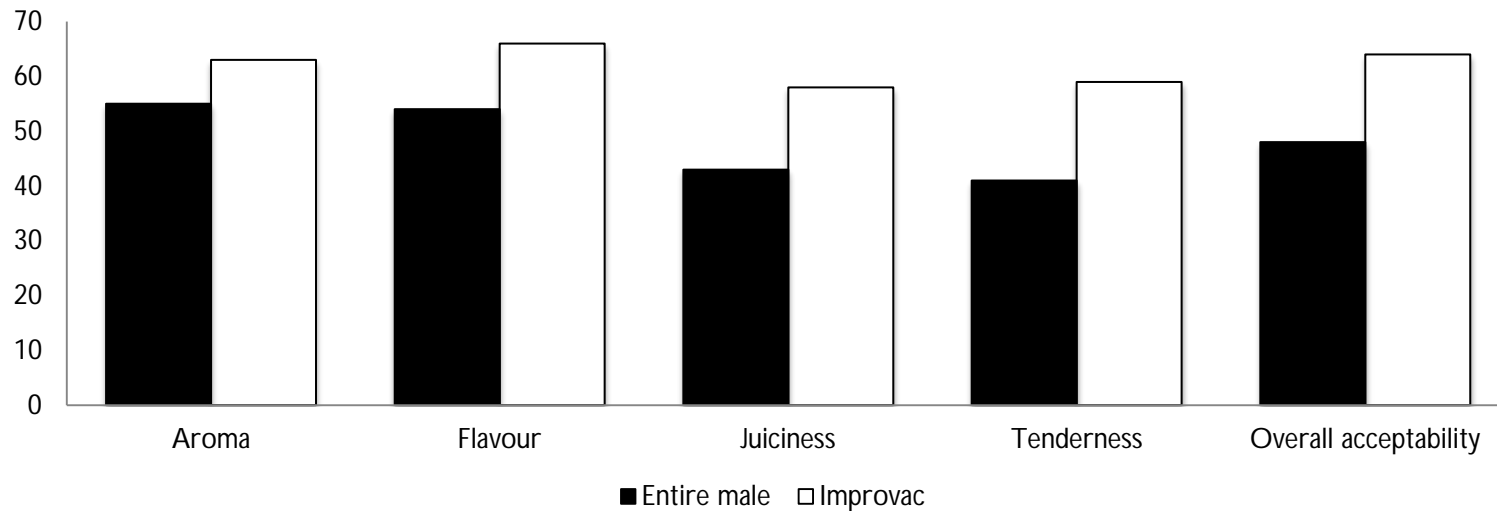
Sensory quality of Improvac pork



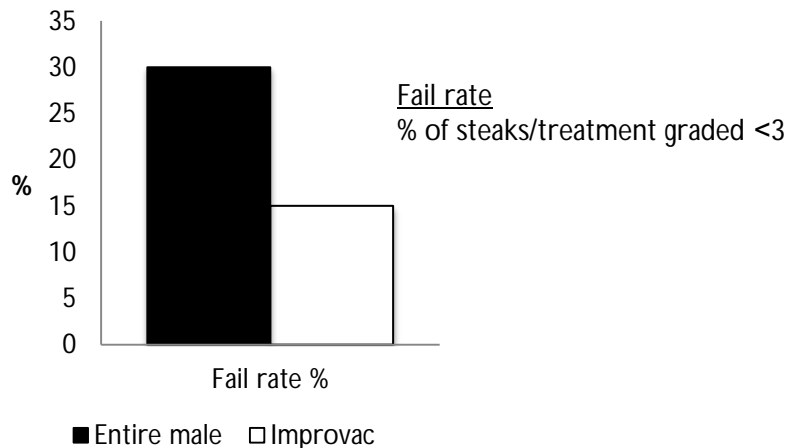
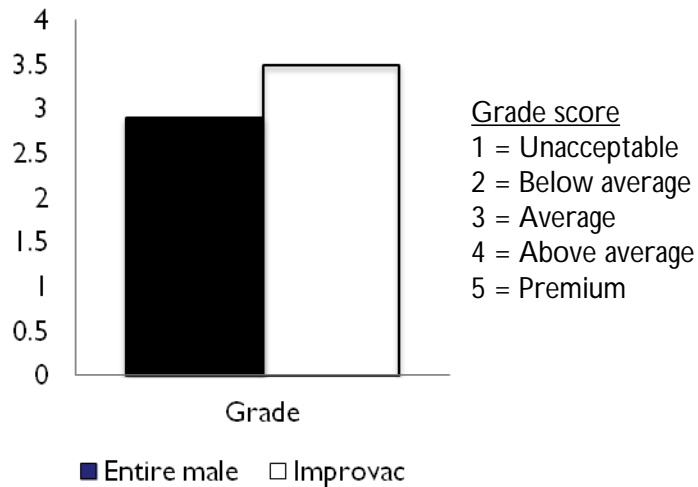
Acceptability SCORE (line scale); 0 = dislike extremely and 100 = like extremely

D'Souza et al., 2003

Sensory quality of Improvac pork



D'Souza et al., 2003



Summary of global dataset

Compilation of large database containing over 250 published and non-published datasets on effects of production, processing and cooking parameters on pork eating and technological quality

	Entire male	Female	Improvac	Surgical castrate
Overall liking	48.37	50.34	57.60	53.61
IMF %	1.82	1.92	2.21	2.343

0 = dislike extremely; 100 = like extremely

(Channon, Unpublished)

The Improvac male pig appears to be the **gold standard** (rather than the female pig)

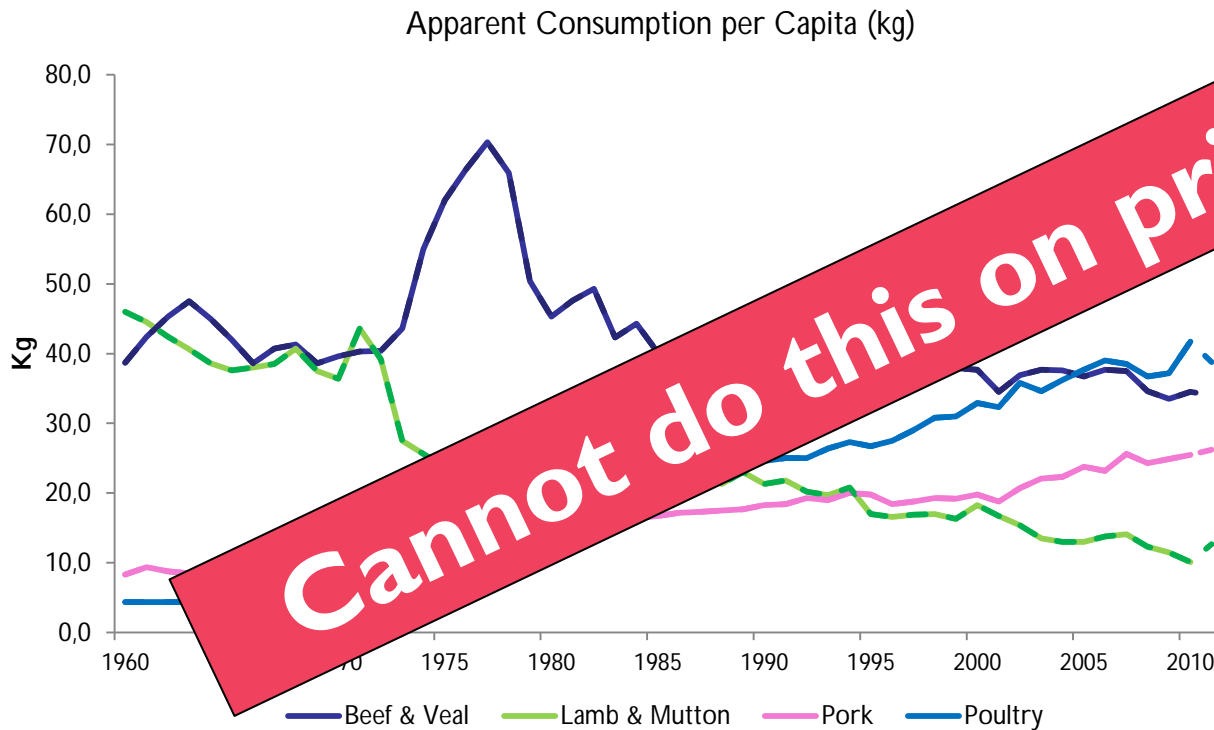
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Why take a position on Improvac[®]?



Increase consumer demand



Total Pork	24 kg
Fresh (Aust)	8.6kg
	10.0kg
Processed (Australian)	5.4kg



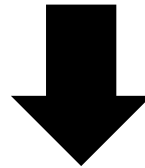
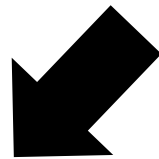


FARM

- Carcase weights
>80kg HSCW

CONSUMER

- Product quality
<10% fail rate



WELFARE OPTIMAL
Voluntary ban on sow stalls

HEALTHY PORK
Heath status

CARBON CONSCIOUS
1kg CO_{2e}/kg HSCW



TOTAL TRACEABILITY
Physi-Trace™



Australian pork industry supports the choice for use of the boar taint vaccine on the basis that;

- Ø It improves welfare of entire male pigs
- Ø RSPCA approved
- Ø It eliminates boar taint
- Ø It improves carcass and product quality
- Ø It is accepted by consumers
- Ø No other viable alternative to the boar taint vaccine

Questions



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