

Edited by Amy Quinn



Welcome to the December edition of our monthly newsletter. December thus far has seen a stabilisation in pig price off the back of numerous consecutive drops. This has been much welcomed and it's hoped it will remain this way for the coming weeks.

The Pig Development Department (PDD) are delighted to report that the first students were welcomed on to the Level 6 Farm Technician Apprenticeship course in a two day induction this month with several pig students amongst them. We at the PDD look forward to getting to know these students and we look forward to working with our colleagues from Clonakilty Agricultural College once more.

If you didn't get the opportunity to register for this course but are interested in enrolling please contact me as soon as possible as we may still be able to secure you a place. It's important to note that this course won't be commencing again until 2025.

With ham and other pork products a staple on Irish dinner tables over the Christmas period we hope that vast majority of consumers will support our industry at this time of year and reach for Irish produce whether it be in the store or in the butchers. With that in mind we at the PDD have put together two recipe videos, "How to Cook your Irish Ham" and "Festive Irish Sausage Rolls". These videos highlight supporting Irish farmers by using Irish pork products. We hope that many people will take note and carry this knowledge with them in their buying habits into the New Year. Further information can be found at the end of this newsletter.

Finally all of us in the PDD would like to wish you, your family and staff a happy and peaceful Christmas and here's to a happy, heathy prosperous new year.

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Adding value to pig meat: What is important to consumers?

Molly Harrison

Consumers are increasingly conscious of how their food is produced, so a recent study in the PDD investigated how this applies to pig meat. We carried out an online survey of approximately 800 pig meat consumers from Ireland and the UK, across a range of backgrounds and demographics. This included 9 mock-ups of different pig meat products (ham, bacon, and pork chops) that had a range of assurance labels on the packaging (none, welfare or sustainably produced), and at a range of price levels: average Irish price, 10% increase, and 40% increase. Each product had a different combination of characteristics (Table 1), with an example in Figure 1.

Table 1. The combinations of product characteristic used to create the nine product images in the survey.

Assurance Label	Product Type	Price
No Label	Pork Chops	> 40%
	Bacon	>15%
	Ham	Standard
Sustainably produced	Bacon	> 40%
	Ham	> 15%
	Pork Chops	Standard
Pig Welfare	Ham	> 40%
	Pork Chops	> 15%
	Bacon	Standard



The 'pig welfare' label was defined as: "a label used on products that come from farms that have been certified to have met the assurance scheme's high

standards of welfare. These standards are higher than the minimum standards set in the law".



The sustainably produced label was defined as: "a label used on products that come from farms that have been certified to have met the assurance scheme's sustainability standards. The standards include different aspects of sustainability such as how much the production of the product impacts the environment and the business's ethics".



Figure 1. Example of one of the product mock ups.

Consumers were asked how likely they would be to purchase each of the 9 mocked up products on a scale of 0 ('would definitely not purchase') to 10 ('would definitely purchase'). The importance and value consumers placed on the product characteristics was then statistically investigated. Overall, assurance labels were found to be the most important factor to consumers, then product type, then price.

Overall, we found most value was placed on the animal welfare label, and least on products with no label (Figure 2).



Figure 2. Importance of each characteristic.

Price was persistently valued negatively by the respondents, and progressively more so as the price increased. Interestingly, Irish consumers had a stronger negative preference for products with no labels than those with either of the two options (sustainability or welfare) and they also more positively valued bacon over ham and pork chops.

Although there were some minor differences between the responses from UK and Irish consumers, in general the results from both countries were very similar, so we were able to

include all respondents in one analysis to identify different types of 'consumer group'. We were able to identify three distinct groups, on the basis of how much they valued the different product characteristics, which we named as '*indifferent*' consumers, consumers that '*like labels*', and '*pro pig welfare*' consumers (Table 2).

Overall, 32% of the sample, had a strong preference for welfare labelled pig meat products. Within this group the '*like labels*' group also found pigmeat with a sustainably produced label to be favourable. Although we have to acknowledge that these data are based upon hypothetical survey data, these results do suggest a market for these types of products, in particular because the attitudes of Irish consumers was similar to those in the UK, where such labelled products hold a significant market share.

Table 2. Characteristics of the Different Consumer Groups

'Indifferent' Consumers 68% of the total	'Pro Pig Welfare' Consumers 9% of the total	'Like Labels' Consumers 23% of the total
Did not really value any of the product characteristics that were assessed.	Really positively valued the pig welfare label, had a negative value for the 'sustainably produced' label.	Most negatively valued products without a label and positively valued the pig welfare label and to a slightly lesser extent, the 'sustainably produced' label.
Most likely to buy products with no assurance label and most valued the product type bacon.	Most likely to buy 'pig welfare' labelled products and most valued the product type ham.	Most likely to buy 'sustainably produced' labelled products and most valued the product type pork chops.
More likely to be from an urban area, to be male, 'pig welfare' products are out of their budget, trust product labels less, and feel less moral responsibility towards the products they buy than the 'like labels' group.	Bought pig meat more frequently than the indifferent group.	More likely to be from a rural area, to be female, to trust product labels, to feel 'pig welfare' products are within their budget and that they have a moral responsibility to purchase them than the indifferent group.
Had less intention to buy 'pig welfare' products, and less knowledge of pigs than the other groups.	Both of these groups had a higher intention to buy 'pig welfare' labelled products, were less likely to think pig welfare is not a priority and had more knowledge of pig welfare and production, than the indifferent group.	

Stunning pigs prior to slaughter - a friend in need is a friend indeed

Laura Boyle

Pigs must be stunned before slaughter to avoid fear, pain, and distress. However, carbon dioxide (CO²) gas stunning, which is the most common stunning method, also causes fear, pain and distress. It has some welfare advantage over electrical and mechanical stunning methods as pigs can move in groups, which is how they move under natural conditions. This reduces pre-slaughter handling stress in comparison to moving pigs in a single file. The main disadvantage of CO² stunning is that pigs do not lose consciousness instantaneously and exposure to CO² at concentrations high enough to induce insensibility is aversive to pigs. It irritates their mucous membranes (in the eyes, nose, mouth/throat) and causes a sense of breathlessness that is frightening. Hence, this aspect of pig welfare is currently under scrutiny with considerable research efforts underway to develop viable non-aversive methods of stunning.

In the meantime, it is important to understand causes of variation in the responses of individual pigs to CO² as this could help identify ways of improving pig welfare during CO² stunning. Pig's behaviour varies from no observable reaction to vocalisations and violent attempts to escape from the gondola as they are immersed into the gas. It now seems that abattoir conditions and practices also plays some role in how they behave. A [study](#) conducted in Australia examined the factors linked with variation in responses to CO² stunning of pigs in five commercial abattoirs. Behavioural responses in the gondola during exposure to CO² stunning such as crawling, escape attempts and mounting were highly variable and possibly multi-factorial, with no simple relationships to the range of measures collected. Nevertheless, the variation in outcomes, and in particular the very low levels of crawling and escape and mounting in the

gondola in one abattoir, suggest that it is possible to minimise aversive reactions in pigs to stunning with CO². It concluded that abattoirs should avoid mixing pigs of different sexes in the lairage and should handle pigs calmly in the race. Sensitive, calm handling of pigs on-farm is hugely beneficial for their health, welfare and performance and now it appears that it also improves their reaction to CO² stunning.

In the same way that pigs prefer to move together as a group because of the security and safety this offers, pigs get support from their 'friends' during a stressful experience. Recent [research](#) from Sweden investigated nitrogen gas encapsulated in high-expansion foam as an alternative non-aversive method for stunning pigs. The researchers found that when testing pigs alone they became distressed as foam built up around them. This was irrespective of whether the foam was filled with nitrogen or air. Distress was evidenced by escape attempts (75% of pigs tried to escape the rising foam). The researchers then exposed pigs to air filled foam either in the presence of a companion from their home pen (pen mate) or an unfamiliar pig. The number of escape attempts reduced significantly when the pigs were with a pen mate (33% of pigs tried to escape) compared to with an unfamiliar pig (42% of pigs in this situation tried to escape). These results suggest that, just like humans, familiarity between pigs is important for social support during stressful experiences. They also emphasise the importance of maintaining pigs in their familiar social groups to reduce stress during transport and slaughter. It may be that repeated remixing on farm, which splits familiar pigs up from their companions/penmates has even more negative ramifications for their welfare (therefore health and performance) than we previously thought.

Pigs

IRTA visit



In mid November a team from Teagasc travelled to the Institute of Agrifood Research and Technology (IRTA) research centre in Monells, Catalonia. This centre specialises in both pig and food research, so the Teagasc team consisted of Amy Quinn, Keelin O'Driscoll and Edgar Garcia Manzanilla from the Teagasc PDD, and Ruth Hamill and Carlos Alvarez from the Ashtown food research centre. The aim of the trip was to learn about up to date research on pig production and pigmeat in Spain, and determine where we have overlapping areas of interest. While there, we learned about significant advances that have been made in lately with regard to labelling of high welfare pigmeat, as well as recent legislative changes in Spain when it comes to animal welfare. We also heard about the wide ranging research programme that IRTA personnel contribute to in the areas of pigmeat product development, preservation and food safety, and food technology. The visit concluded with a tour of their impressive food research facility, which included equipment and infrastructure to evaluate pigmeat right through from slaughter, through to processed meat products such as sausages and salamis. The teams

identified many areas of common interest, and we hope to collaborate formally in the future!



"The Pig Edge" celebrates Episode 50!

This month "The Pig Edge" released its 50th podcast episode. For this celebratory episode Amy Quinn was joined by; Heather Peppard Nutritionist with Brett Brothers and Roy Gallie Pig and Tillage Farmer and chair of the IFA National Pigs Committee to we reflect on the strengths of our industry and focus the opportunities that lie ahead. Thanks to all our listeners for joining us over the past four years. We look forward to bringing you more insights and interviews in 2024.

PDD Christmas videos

The PDD have put together two recipe videos to be released over the Christmas period, "How to Cook your Irish Ham" and "Festive Irish Sausage Rolls" to highlight supporting Irish farmers this Christmas by using Irish pork products by selecting products displaying the Board Bia logo or encouraging them to ask their butcher about the origin of their ham this year. These videos will be promoted on our social media channels throughout the Christmas period. These videos can be viewed on the [Teagasc YouTube](https://www.teagasc.ie/animals/pigs/) channel.



For more information:

Please visit our webpage at:
<https://www.teagasc.ie/animals/pigs/>

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