

# Investigation into the farmers of Carmarthenshire's awareness and perception towards the Waste Management (England and Wales) Regulations 2005.

## Introduction:

- There are over 300 farms within Carmarthenshire, which has an impact on the local Environment, such as the release of emissions through processes and the large amount of waste<sup>(1)</sup>. For example, spreading the synthetic and organic nitrogen fertilizers, releasing nitrous oxide.
- The regulations were introduced to rule such processes to reduce the waste taken to landfill in the UK, which the 2010 target was reached.
- Two previous studies measured the affect of the regulations on the agriculture industry<sup>(2,3)</sup>. The knowledge and perception of the farmers towards the regulations were fairly low:
  - 17% knew there were waste regulations.
  - 13% had a great amount of knowledge, 47% didn't know much.
- 73% still incinerated or burnt their waste, 35% still buried or tipped contributing to high levels of methane and particular matter. However, 53% adapted and got contractors to dispose or recycle their waste.
- The level of education one receives has found to be an influence on the sort of practice they carry out<sup>(3)</sup>.
- The aims of this research project is to discover whether the level of the farmer's knowledge and perception has changed in Carmarthenshire,
- Also the project aimed to discover whether a change in policy is needed or further assistance is required from the Environmental Health industry.



## Methodology:

- A qualitative case study was interpreted to gather in depth information on their opinion and knowledge towards the legislation from a small group of farmers.
- The purpose selective sampling method along with a non-probability sampling tool was used to choose five farmers as a true representative according to the researcher<sup>(4,5)</sup>. The same sampling method was used to select the only recycling plant chosen.
- A ethical application was given to the Ethical Panel at Cardiff Metropolitan University, which was granted. Agreement of the data obtained was saved onto a password protected computer and hard-drive.
- Each participant was contacted via a telephone call and were given a information sheet and consent form upon arrival to sign, giving permission to obtain data which the researcher kept for evidence of approval of participation<sup>(6)</sup>.
- The data was collected through semi-structured interviews which required the minimum amount of structure in gather the maximum strength of an answer through an influence all of which was recorded on a Dictaphone<sup>(7)</sup>.

## Results:

- Four themes were found in this study: **1) Awareness and level of understanding, 2) Education and its influence, 3) Implications of the regulations i.e. Finance and time and 4) Farm Waste Management.**
  - 1) One out of five were not aware of regulation's title and content at all. All other participants did and expanded thoroughly into the content of the regulations. However, 3 out of 5 had full time farming advisors which are updated as soon as new information is formed, whereas 2 other participants have to research themselves meaning they may not be updated as often as they gain knowledge from National Farmers Union forums and farming magazines- giving evident that it isn't as effective as one participants was completely unaware of the regulations.
  - 2) Level of education has an influence on the type of practice carried out<sup>(3)</sup>. All participants had been educated to the level of GCSE and gained a diploma in Agriculture. However, 4 out of 5 still carried out bad practice such as burning of waste and releasing reinstates into watercourses. Only one participant continues to keep up to date by attending training courses. All other participants believed that courses were a waste of time and seem repeated, as well as raising the issue of financial issues.
  - 3) **Financial:** A controversy occurred for the farmers who took a steep financial impact whilst modifying their farms to comply with the regulations, one farmer had a bill exceeding £50,000 for changing storage facilities and building walls. A government funding scheme "BPS" gives small to medium sized farms grants to help towards activities they need to carry out. The 3 farms funded by "BPS" said it wasn't enough to cover modifications for profitable and non-profitable activities.
  - 3) **Time:** Was a common issue for four farmers, as a profitable income was a priority for them. Since the legislation came into force it increased the stress ad nuisance of farmers, as more time allocation is needed to carry out waste procedures that were not a statutory duty before, three admitting that they don't always carry out the right practice e.g. Logging information in a log book. With four admitting that they burn their dirty waste as its less time consuming, but wouldn't admit to governing authorities as business representation is too important.
  - 4) Correct Waste Management procedures is still a issue with only one disposing of all waste correctly. All others dispose some of their waste, but also continuing to burn and keep waste for longer than 12months exceeding regulation requirements, reason being for the saviour of money and not enough time to carry out the practice.

## Conclusion and Recommendations:

- Since the introduction of the regulations from an agriculture perspective they've had an influence on the bad attitude and perception towards waste practices.
- A recommendation of co-operation from governing bodies such as the Local Authority and Environment Agency, by introducing reduction priced schemes for those who carry out compliance as this was a main issue for non-compliance.
- Within the study the internet is a go to resource for some farmers, by introducing government websites that are reliable and educate farmers through e-learning modules.

### References:

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