

IFA National Pigs Meeting

Environmental Issues

Areas

- Sustainability of pig meat production
- Nitrates update
- Industrial Emissions Directive – review
- BATC Form from EPA
- Slurry value

1. Sustainability of pig meat production

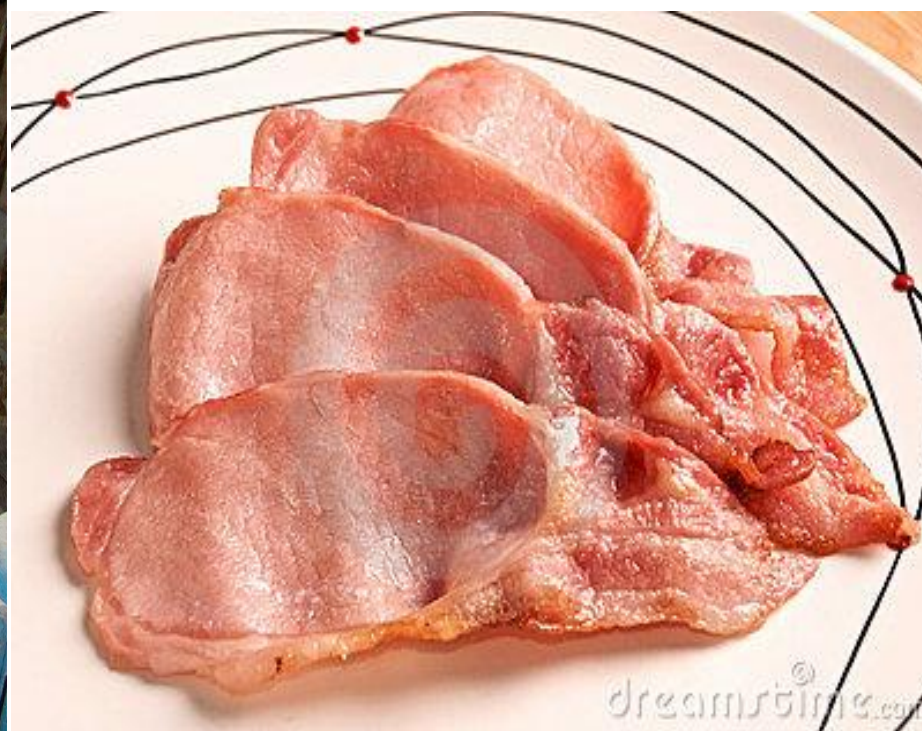
Sustainability of Food Chain



Farm



MARKET



Pork is the most consumed meat in the world.
Its production is estimated to emit 668 million tonnes of CO₂ eq/year.
This equates to 9% of total livestock emissions

Challenge

- Is the pigmeat production chain **sustainable?**
- How can we prove this?
- Is this important in the marketplace?????

How can we show the production chain is sustainable?

- **Teagasc PDD linked with Bord Bia**
- **The Carbon Trust has independently validated a model on the beef side**
- **Work was done to develop a C assessment tool for Irish pigmeat production**

Input items

| | | |
|--------------------------------------|-----------------|--|
| Name of Pig Farm | 1 Joe Bloggs | |
| NPITS Herd Number | 2 ZX0058 | |
| Address | 3 DUBLIN | |
| Start Date | 4 06/04/2021 To | 5 31/05/22 |
| Total No. of Pigs Produced | 6 | 23753 |
| Average carcase Weight | 7 | 87.6kg |
| Total Feed Per Pig | 8 | 297kg |
| FEED SOURCE | 9 | Purchased Home milling or Purchased Feed |
| Sow Feed Usage | tonne/sow/year | 10 1.31 |
| Weaner Daily Feed Intake | g/Day | 11 974 |
| Finisher Daily Feed Intake | g/Day | 12 2269 |
| Soya Source | DROPDOWN LIST | 13 Argentina |
| LAND USE CHANGE re SOYA ? | YES/NO Option | 14 yes |
| IF PURCHASED FEED - Distance to Mill | 15 | 25km |
| Av. Wgt of Weaner at Sale/Transfer | 16 | 46.3kg |
| Kill-out Percentage | 17 | 76.3% |
| No. Sow Deaths | 18 | 40 |
| No. Piglet Deaths | 19 | 2551 |
| No. Weaner Deaths | 20 | 508 |
| No. Finisher Deaths | 21 | 740 |

Suggested Report



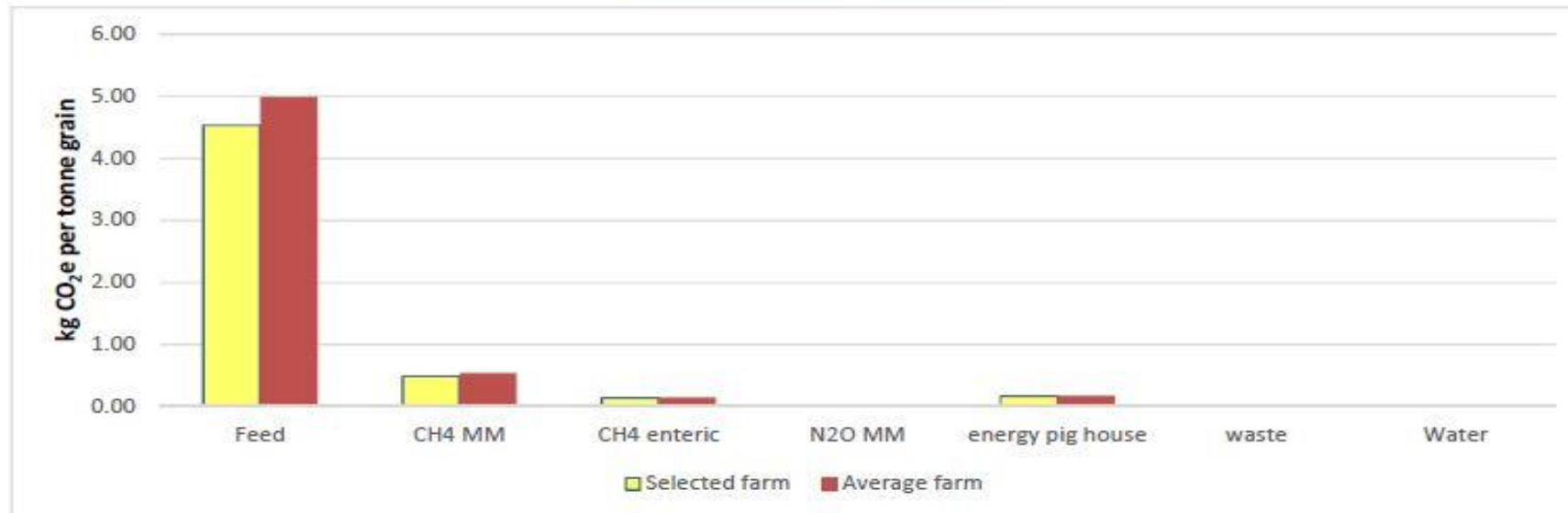
Irish Food Board

| | |
|-----------------------|---------------------|
| Farm Name and ID | Joe Bloggs - ZX0058 |
| NPITS Herd Number | ZX0058 |
| Date of questionnaire | ? - |
| Footprinting Year | 2015 |

| | |
|-----------------------------------|---|
| Total Number of farms in database | 2 |
|-----------------------------------|---|

Emissions

| | Selected farm | Average | Ranking |
|--|---------------|---------|------------|
| Emissions (kg CO ₂ e per kg liveweight) | 5.36 | 5.87 | Top 25%... |



2. Nitrates update

Nitrates update (SI 113 of 2022 on 11/3/2022)

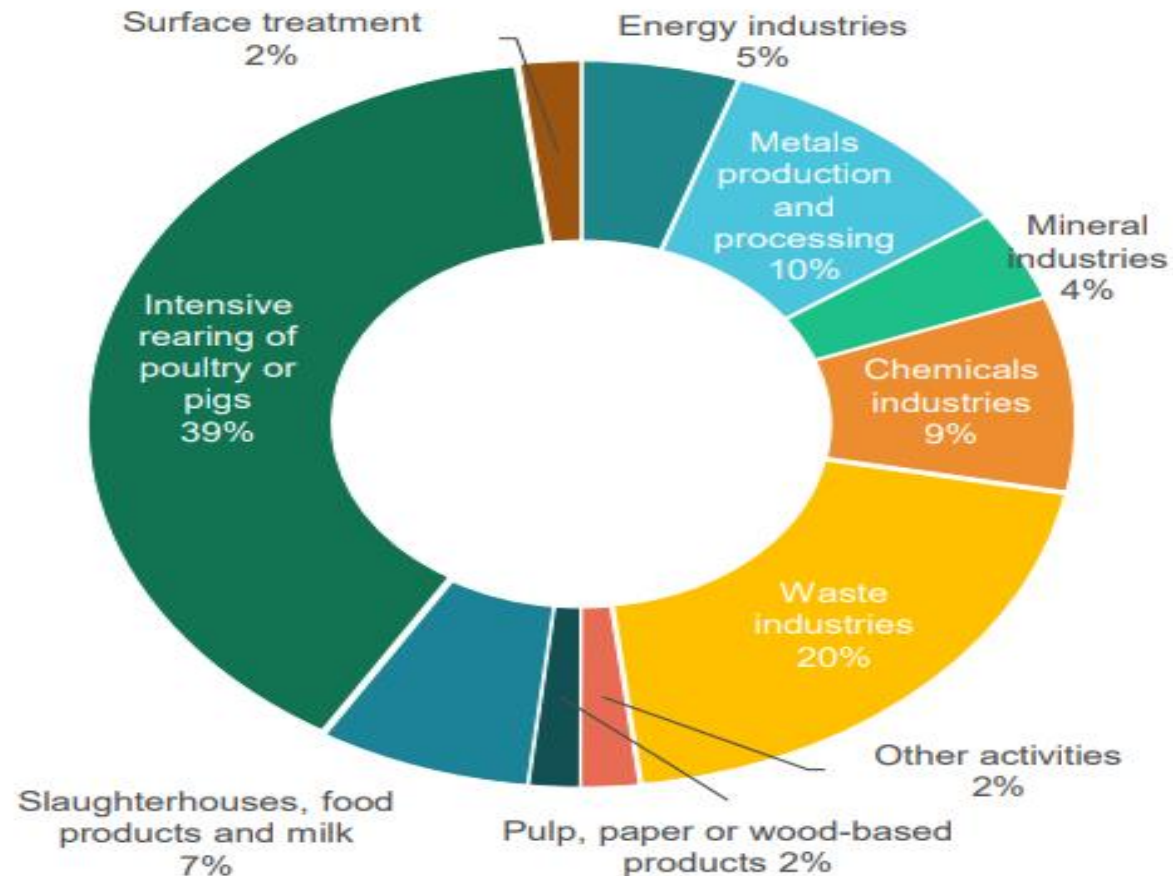
- Calculation based on current years SR,
- All farms with grassland SR >130kg Org-N /ha to soil test,
- All arable farms must soil test,
- Soil tests are valid for 4 years and should be for 4ha. area (max of 5 in exceptional circumstances),
- All pig slurry to be spread by LESS

3. Industrial Emissions Directive

Industrial emissions Directive today

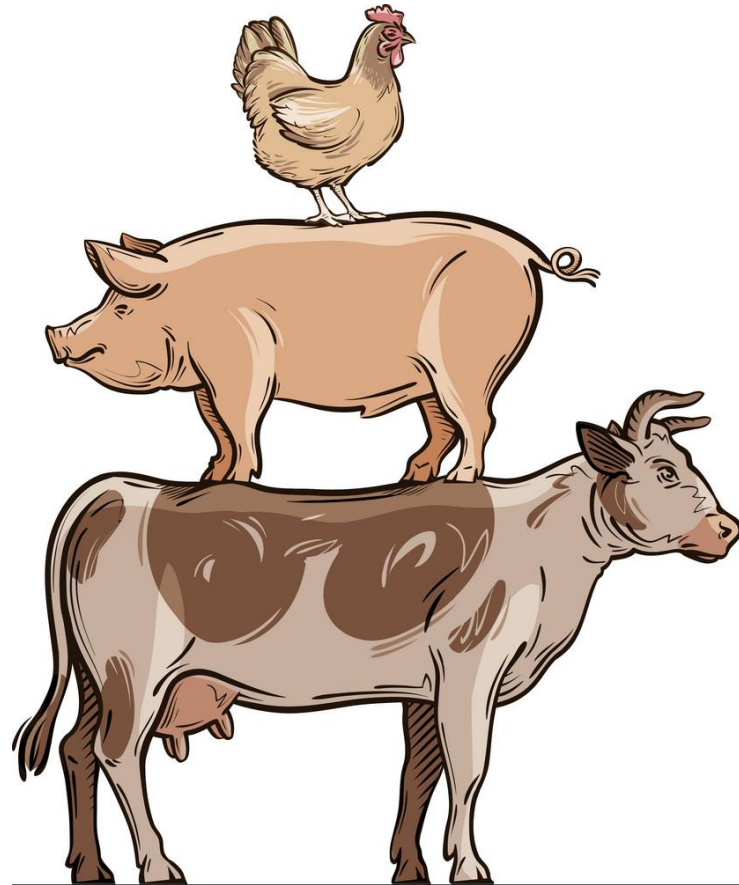
IED regulates over **30 000 large industrial installations** and **20 000 farms**

% of installations per industry sector



Scope

Previously:
750 sows
2000 fattening pigs
40.000 poultry species

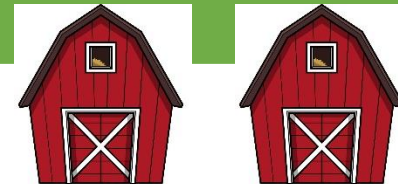


Inclusion of cattle (>150 LSU)
Lowering the thresholds for
the rearing of poultry and
pigs to 150 LSU,
Including mixed farms

Proposal:
300 sows
500 other pigs
10 714 laying hens
5 000 other poultry
species unless a different
coefficient is proposed (21
428 broilers?)

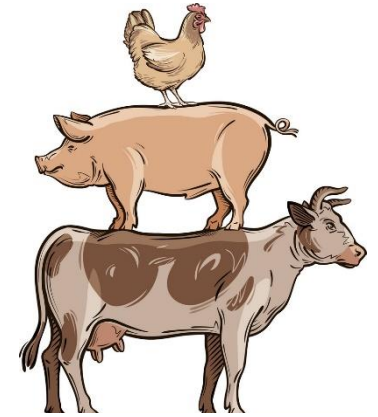
Aggregation rule (Art. 70(b))

- installations close to each other run by the same operator or different operators with a legal or economic relationship



What is a LSU?

The reference unit used for the calculation of livestock units (=1 LSU) is the grazing equivalent of one adult dairy cow producing 3 000 kg of milk annually, without additional



Conversion rates of animals to livestock units ('LU') referred to in Article 9(2)

| Animal | Source | Head per LSU | LSU per head |
|-------------------------------|--------------------------------|--------------|--------------|
| Cattle | Implied average from all farms | 1.382 | 0.724 |
| Pigs | | 4.355 | 0.230 |
| Poultry | | 48.010 | 0.021 |
| Laying hens | Eurostat | 71.429 | 0.014 |
| Other poultry | Eurostat | 33.333 | 0.030 |
| Production pigs* | Eurostat | 3.333 | 0.300 |
| Sows (without piglets) | Eurostat | 2.000 | 0.500 |
| Piglet | Eurostat | 37.037 | 0.027 |
| Sows (with 10 piglets)* | Eurostat | 1.298 | 0.77 |
| Dairy cattle | Eurostat | 1.000 | 1.000 |
| Other cattle | Eurostat | 1.250 | 0.800 |
| Cattle under 1 year old | Eurostat | 2.500 | 0.400 |
| Cattle of 1 – 2 years old | Eurostat | 1.428 | 0.700 |
| Heifers 2 years old and older | Eurostat | 1.250 | 0.800 |

| | |
|--|----------|
| Bulls, cows and other bovine animals over two years and equine animals over six months | 1,0 LU |
| Bovine animals from six months to two years | 0,6 LU |
| Bovine animals below six months | 0,4 LU |
| Sheep and goats | 0,15 LU |
| Breeding sows > 50Kg | 0,5 LU |
| Other pigs | 0,3 LU |
| Laying hens | 0,014 LU |
| Other poultry ⁽¹⁾ | 0,03 LU |
| Conversion rates may be increased, taking into account scientific evidence to be explained and duly justified in the RDPs. Other categories of animals may be added exceptionally. Conversion rates for any such categories shall be established taking into account particular circumstances and scientific evidence to be explained and duly justified in the RDPs. | |

Impact assessment done by Ricardo for DG ENVI

IED revised proposal (LSU from rural development)

4. CID and BAT

Intensive Rearing of Poultry or Pigs CID EU 2017/302

- Intensive Rearing of Poultry or Pigs CID 2017/302 published on 15 February 2017.

| | | | |
|--|----|--|----------|
| 21.2.2017 | EN | Official Journal of the European Union | L 43/231 |
| COMMISSION IMPLEMENTING DECISION (EU) 2017/302 of 15 February 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for the intensive rearing of poultry or pigs <i>(notified under document C(2017) 688)</i> (Text with EEA relevance) | | | |
| THE EUROPEAN COMMISSION, | | | |
| Having regard to the Treaty on the Functioning of the European Union, | | | |
| Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) ⁽¹⁾ , and in particular Article 13(5) thereof, | | | |
| Whereas: | | | |
| (1) Best available techniques (BAT) conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU and competent authorities should set emission limit values which ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions. | | | |
| (2) The forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection, established by Commission Decision of 16 May 2011 ⁽²⁾ , provided the Commission on 19 October 2015 with its opinion on the proposed content of the BAT reference document for the intensive rearing of poultry or pigs. That opinion is publicly available. | | | |
| (3) The BAT conclusions set out in the Annex to this Decision are the key element of that BAT reference document. | | | |
| (4) The measures provided for in this Decision are in accordance with the opinion of the Committee established by Article 75(1) of Directive 2010/75/EU, | | | |
| HAS ADOPTED THIS DECISION: | | | |
| <i>Article 1</i> | | | |
| The best available techniques (BAT) conclusions for the intensive rearing of poultry or pigs, as set out in the Annex, are adopted. | | | |

Agency's Approach

- Agency will be reconsidering and updating all licence to comply with Commission Implementing Decision (CID) establishing BAT conclusions
- The Agency approach will include:
 - public consultation and engagement with all licensees and relevant stakeholders;
 - an examination of all relevant licences in relation to their compliance with the relevant CID BAT requirements;
 - amendments of licences where possible, whereby the scope of the amendments are limited to the CID requirements.

Agency's Approach

- BAT Questionnaire has been prepared and will be sent to all relevant P&P sites ~ approximately 170 sites;
- Licences issued after July 2017 already have CID requirements incorporated into them;
- Licences currently undergoing review will not be sent questionnaire;
- Questionnaire sent on 26th January.
- Deadline for return is 28th April.
- Where a derogation from the requirements of the CID is requested by the licensee, the licensee must apply for a review of their licence.
- Please send any queries to: Industrial Emissions Licensing Queries
I.LicensingQueries@epa.ie

CID structure

Scope, Definitions, General Considerations

1. General BAT conclusions

1.1 Environmental management systems (BAT 1)

1.2 Housekeeping (BAT 2)

1.3 Nutritional management (BAT 3-4)

1.4 Water efficiency (BAT 5)

1.5 Emissions from waste water (BAT 6-7)

1.6 Energy efficiency (BAT 8)

1.7 Noise (BAT 9-10)

1.8 Dust (BAT 11)

1.9 Odour (BAT 12-13)

CID structure

1.10 Emissions from Manure (BAT 14-15)

1.11 Emissions from slurry storage (BAT16-18)

1.12 On farm processing of manure (BAT19)

1.13 Manure spreading (BAT 20-22)

1.14 Emissions from production (BAT 23)

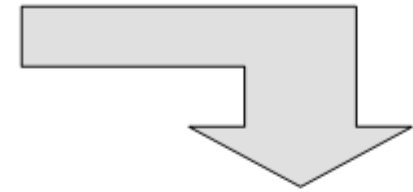
1.15 Monitoring of emissions and process parameters (BAT 24-29)

2.1 Ammonia emissions from pig houses (BAT 30)

Pig Manure is worth €58.15 per 1,000 gallons

One m³ pig manure is worth €12.81 at 4.3 % solids

| Nutrient | N Nitrogen | P Phosphorus | K Potassium |
|---------------------------|---------------------------------------|-----------------|----------------|
| Kg per m ³ (a) | 4.2 | 0.8 | 2.2 |
| Available to Crop % (b) | 50 <small>(SI 113 of 2022)</small> | 100 | 100 |
| Cost per Kg € (c) | 2.38 | 4.84 | 1.79 |
| Total Value | €5.00 | €3.87 | €3.94 |



* 1m³ = 220 gals.

* 4.54 m³ = 1,000 gals

* €12.81 x 4.54 m³ =

€58.15 per 1,000 gals.