USING GFLI Data Sustainability at your fingertips

IGFA Workshop

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Sustainability challenges



The most pressing sustainability themes in animal production in EU

- Animal Welfare
- Animal health and antibiotic use
- Greenhouse Gas emission (GHG)
- Nitrogen emission
- Deforestation free soy, palm
- Circularity
- Safety feed & food





Scope 3 reduction targets some large retailers (status Sep 22)



*Science Based Targets initiative to reduce carbon footprint



3



Scope 3 reduction targets some large food processors (status Sep 22)

	Danish Crown		LACTALIS	variant Campina air	Nestlē
	Meat	Meat	Dairy	Dairy	Dairy
CO2eq reduction target 2030	50%	32% Pork 26% Beef	25% (2025) 50% (2033)	-33% on member dairy farms	50%
Net zero target	2050	2050	2050	2050	2050







Environmental footprint information of feed will be required to calculate the footprint of animal products



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Main customer challenges addressed

- 1. Future **demand from retailers for Ecological Footprint metrics** to be put on foodstuffs like milk and meat products.
- 2. Current Farm models in Ireland are using **generic Footprint** figures for Compound Feeds.
- 3. Compound Feed suppliers will need the most **up to date information on raw materials**
- 4. Many Feed mills **don't have the resources to use the various Ecological Footprint data bases** available or to work out the Ecological Footprint metrics for feed production.
- 5. Raw Material imports are not single source so **need to have good data from many regions**
- 6. Feed mills want to **distinguish themselves in the market** by being sustainable and potentially selling an eco friendly feed.











Target groups



		6	6	6
Nutritionist Formulator	Sustainability Product manager managers	Purchasing	Marketing	Customers
Users	DMU		Stake	holders



Accredited knowledge to feed mills

E

PEFCR

European Feed

Guidelines





What is in the Feed Environmental Footprint

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Feed Ingredient

The environmental impacts of cultivating, harvesting (or extracting), and processing the ingredient.





Feed Mill

The environmental impacts of the ingredients used in the feed formula along with the source and amount of energy used by the feed mill.



Inbound Transport

The environmental impacts of the distance traveled and the modes of transportation used to bring the feed ingredient to the feed mill.

Secondary data from accredited databases

Company specific data or data from accredited databases

Company specific data



Data collection for calculating feed impacts







(1) GFLI	Global Food LCA Institute Database; specialized database for feed ingredients; accepted by industry and recommended by PEFCR feed standard, open-source (for aggregated LCA data) -> our prioritized go-to data source for secondary LCA data
(2) Agri- footprint	Specialized and acknowledged international LCA database; accessible via SimaPro license; mainly for agri products but also some additives/ functional ingredients; closely aligned with GFLI (same core developer)
(3) Agribalyse	French database for agri and feed ingredients; some additional datasets available (e.g. some micro ingredients)
(4) Ecoinvent	Established LCA database for different industry sectors, esp. for transport data, minerals, fuels, energy
(5) World Food LCA Database	Few additional but not so commonly used agri ingredients





- European Commission recommend using the Product Environmental Footprint Category Rules (PEFCR) as the Standard for LCAs
- FEFAC promote the use of data bases which follow PEFCR.
- GFLI has been developed in line with these rules.
- Regular update allow us to have the most up to date LCA s available
- GFLI can develop more regional data to avoid Countrywide general figures.
- GFLI can add in specific footprint data provided it is aligned with PEFCR.



The advantages of using an EF model





Calculate the overall environmental footprint of the mill



Provide accurate data to farmers and processors when required Report a figure per tonne of compound/blend produced

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Make informed purchasing decisions based on sustainability metrics

Environmental Footprint Model







utriopt	Environment	al footprint (impacts per metric ton o	f material)					
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- back to MyNutriOpt		Survival A	gerar		Last Moderati	CUMATE CHANCE (Ag CODA)		(og citte
MyFeedPrint	🗍 Barley Irish (M)	Barley (Barley)	Ireland	28/05/2022	09/01/2023	371.1013	0.2324	
ine material	🗍 Barley in M 100km	Barley (Barley)	Ireland	27/06/2022	09/01/2023	398.8524	0.2358	
	acriey UK M	Barley (Borley)	United Kingdom	27/05/2022	27/06/2022	626.3776	0.4272	
eed mills	D Bean001	Seons edible	Europe	20/09/2022	20/09/2022	1105.0298	0.7761	3
Feed management	D time001	Calcium carbonate (Calcium carbonate)	Europe	28/11/2022	05/12/2022	88,8152	0.1528	
7 MutalikPrint	Maize Distillers US	Distiliers dried grains and solubles (DDGS com)	United States	22/07/2022	13/10/2022	1213.0061	6.9431	
	DDGS Malas	Distiliers dried grains and solubles (DOGS corn)	United States	11/10/2022	II/10/2022	1058.7378	1,8668	
Ration management	Distillers	Civiliers grain, barley	Europe	26/07/2022	26/07/2022	1896.0463	1.8943	
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		Magnesium oxide (Mg Oxide 50%)	Europe	13/01/2023	13/01/2023	1164.5179	1.8826	
	D Matter (US) M	Maize (Maize)	United States	26/05/2022	26/05/2022	706.5351	0.6257	
	D Maize Fr	Maize (Maize)	France	20/06/2022	29/11/2022	529.7326	1.1581	
	🔲 Maize Can	Malze (Malze)	Canada	07/10/2022	16/01/2023	645.9593	0.5628	7
	🗍 Matze-Brazil	Maize (Maize)	Brazil	11/10/2022	11/10/2022	1155.7284	0.6646	:46
	🗍 Maize Ukraine	Maize (Maize)	Ukraine	24/11/2022	09/01/2023	886.1069	2.2418	10
	🗍 M2FL Braz	Maize fiakes (Maize flakes)	Global	21/10/2022	21/10/2022	958.6381	0.8245	-11
	Gluten Medi US	Maize gluten feed meal (Maize gluten feed 200-230)	United States	22/07/2022	22/07/2022	1771.3789	7.3818	
		Maize gluten feed meal (Maize gluten feed 200-230)	United States	11/10/2022	11/10/2022	1573.6549	2.2938	
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Environmental footprint (impacts per metric ton of material) nutriopt + Add raw material Compare materials LAST GWP - LULUC ACIDIFICATION CLIMATE CHANGE METHANE AMMONTA EUTROP. (WAT.) back to MyNutriOpt MATERIAL A ORIGIN CREATED MODIFIED (kg CO2e) (eg) (kg CO2e) (mol H+e) (kg) (kg Pe) Barley Irish (M) Barley (Barley) 26/05/2022 09/01/2023 371.1013 1.1529 10.5434 2.66471 0.2034 MyFeedPrint Ireland 0.2324 Barley Irl M 100km Barley (Barley) 27/06/2022 09/01/2023 Ireland 390.0524 0.2358 1,1951 10.9465 2.76218 0.2100 Row material Barley UK M Barley (Barley) United Kingdom 27/06/2022 27/06/2022 626.3776 0.4272 8 = 12.1696 2.81702 0.1781 Feed mills Bean001 Beans edible 20/09/2022 20/09/2022 Europe 1185.8298 0.7761 369.9120 12,4933 2.42172 0.5843 Lime001 Calcium carbonate (Calcium carbonate) 05/12/2022 Europe 28/11/2022 88.0152 0.1520 8 * 0.3568 8.00018 0.0005 Feed management Maize Distillers US Distillers dried grains and solubles (DDGS corn) United States 22/07/2022 13/10/2022 1213.0051 2.96750 0.1770 6.9411 2.4789 16.1494 MyMilkPrint DDGS Maize Distillers dried grains and solubles (DDGS corn) 11/10/2022 11/10/2022 United States 1058.7378 1.8668 2.1814 13,5978 2,53322 0.1581 Ration management Distillers Distillers grain, barley 26/07/2022 26/07/2022 1885.8463 1.85886 0.1190 Europe 1.8943 0.0193 9.9241 Farm assessment Beans Irish Horse beans (Horse beans not white) United Kingdom 09/01/2023 09/01/2023 44.3792 0.18235 0.0301 0.0252 3.1363 0.7872 Cal Mag Magnesium oxide (Mg Oxide 50%) 13/01/2023 13/01/2023 Europe 1164,5179 1.8826 0.3172 3.2967 8.07821 0.1055 Maize (US) M Maize (Maize) United States 26/05/2022 26/05/2022 786,5351 0.6257 13.5112 2.30691 0.1677 3.7688 Maize Fr Maize (Maize) 20/09/2022 29/11/2022 529.3326 France 1.1581 8 * 10.2679 2.35724 0.1635 🗌 Maize Can Maize (Maize) 07/10/2022 16/01/2023 Canada 645.9593 0.5628 72.8969 10.2052 1.72975 0.1110 Maize-Brazil Maize (Maize) Brazil 11/10/2022 11/10/2022 1155.7284 0.6646 464.8837 10.9219 1.77609 0.2735 Maize Ukraine Maize (Maize) 24/11/2022 09/01/2023 886.1869 1.68152 0.1067 Ukraine 2.2418 102.8532 10.2918 MZFL Braz Maize flakes (Maize flakes) Global 21/10/2022 21/10/2022 958.6381 0.8245 114.1756 19.4274 3.53900 8.2848 Gluten Medi US Maize gluten feed meal (Maize gluten feed 200-230) United States 22/07/2022 22/07/2022 1771.3789 18.5280 2.71574 0.1636 7.3810 2.2597 MaizeGlut Maize gluten feed meal (Maize gluten feed 200-230) United States 11/10/2022 11/10/2022 1573.6549 2.2938 2.0337 15.9247 2.36395 0.1481 41 trouw Note: impacts per metric ton Note: Values marked with "*" doesn't have characterization factor available



Raw materials per page: 25 v Page: 1 v of 3 · ·



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eed management	Blend 123	maize soya barley	06/08/2022	764.1785	2.2684	5.6174	11.7294	
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	Dairy TMR Blend AS		10/10/2022	2280.2844	4.8401	1294.4882	10.3558	
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	G Super Bull Nuta	Beel laed	13/01/2023	1864.5692	2.9115	333.6728	9.7812	
	🗍 Heiter 🕅	17% Heiter Blend	21/10/2022	1335.9921	3,6519	587.3825	18.6295	
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	I Ivine 15% Dairy Nuts	Wm invine	05/12/2022	1557.0121	4.2864	699,7933	18,4349	
	C Loyer Feed	Stage 1	26/11/2022	16124.4126	17.7663	1234.3316	62.1148	
	Loyer Feed	Stage 2	28/11/2022	1682.9865	2.0775	937.2285	10.1519	
	Loyer feed	Stoge 3	28/11/2022	1561.114	1.8758	829.3368	10.0975	
	C Loyer Feed NAm	North American Maize/Soya	28/11/2022	997.8665	1.7461	238.1242	10.5131	
	🗍 Üburn Dairy Bend - High	Wagon Mixed	17/10/2022	1955.7081	4.1181	1365.2862	8.6431	
a second	Uburn Dairy Bend - Low	Low group blend	20/10/2022	1298.8767	3.3771	784.2844	8.9823	

Feed × 🖸 Export 🏻 🍵 Dairy 18% Feed name Manufacturing date Dairy 18% 22/07/2022 🗐 Additional information Dairy Nut FEED MILLS: MilsO ^ Feed mill product Per ton of feed (as fed)() Compound Mili ~ 1 mt V X COMPOSITION: ^ Raw Materials from Feed Print() kg per metric ton of feed Name 1 ∠ 會 Maize (US) M - Maize (Maize) 150 Name 2 its per metric ton of feed 上言 Wheat France (M) - Wheat (Wheat) 200 Name 3 kg per metric ton of feed SoyaBean Arg (D) - Soybean meal 200 上言 (Soybean meal 46, 50 < Cfiber < 70) Name 4 kg per metric ton of feed 上言 Gluten Meal US - Maize gluten feed 275 neal (Maize gluten feed 200-230) lig per metric ton of feed iame 5 Soya Hulls Brz - Soy bean hulls (Soya 150 上言 ulis, CFiber 320-360) Name 6 itig per metric ton of feed 上言 25 Mineral Premix NI - Mixtures of ninerals Current weight: 1000 kg

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Thanks For listening

