Supporting Information

Environmental impacts of dietary recommendations and dietary styles –Germany as an example

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Tab. 1 Supply, consumption, intake amounts and conversion factors for 1985-89 and 2006 as well as energy contents of the food products

	2006				1985-89					
	Supply quantity (incl. farm & food industry losses)	Consumption quantitiy (incl. retailer & household wastage)	Intake	Conversion factor	Supply quantity (incl. farm & food industry losses)	Consumption quantitiy (incl. retailer & household wastage)	Intake	Conversion factor	Energy content*	References, comments
	kg person^{-1} year^{-1}	kg person^{-1} year^{-1}	kg person^{-1} year^{-1}	Intake / supply	kg person^{-1} year^{-1}	kg person^{-1} year^{-1}	kg person^{-1} year^{-1}	Intake / supply	kcal 100g^{-1}	
Butter	6.6		4.7	0.71	7.9		7.2	0.91	754	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
Cheese, curd	23.2		17.4	0.75	16.9		14.1	0.83	405	Supply/consumption 2006: (5), Tab. 302; supply/consumption 1985-89: (4), Tab. 298
Dairy products (yoghurt, cream)	42.1		31.8	0.76	36.5		20.7	0.57	126	Supply/consumption 2006: (5), Tab. 302; supply/consumption 1985-89: (4), Tab. 298
Fresh milk products	62.6		43.8	0.70	67.4		39.6	0.59	59	Supply/consumption 2006: (5), Tab. 301; supply/consumption 1985-89: (4), Tab. 294,297
Meat products (incl. offals)	85.9		39.7	0.46	102.6		57.7	0.56		
- Beef, veal	11.9		7.3	0.61	24.6		14.9	0.61	104	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
- Pork	54.5		22.0	0.40	64.2		33.8	0.53	166	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
- Poultry	16.7		9.4	0.56	11.2		7.8	0.69	131	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
- Other meat (sheep, goat, horse, deer etc.)	2.7		1.1	0.40	2.6		1.2	0.47	135	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
Egg products	13.0	12.9	6.9	0.54	16.3	16.2	11.3	0.69	142	Supply 2006: (5), Tab. 171; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 174; consumption 1985-89: (4), Tab. 215; intake probably underestimated due to egg usage in prepared meals
Fish products	15.5		9.5	0.61	12.6		6.1	0.48	101	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215
Grain products (incl. beer, without sugar)	134.4	120.4	106.5	0.79	122.6	112.2	106.9	0.87	240	Supply 2006: (5), Tab. 233, 247; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 288, 242; consumption 1985-89: (4), Tab. 215; consumption data in "flour equivalents according to (5)
Vegetables	113.5	100.0	86.7	0.76	80.4	69.1	53.1	0.66	26	Supply 2006: (5), Tab. 259, 248; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 256, 243; consumption 1985-89: (4), Tab. 215, supply via home gardens excluded
Fruits (incl. juices)	132.0	126.6	128.5	0.97	95.9	90.9	51.9	0.54	46	Supply 2006: (5), Tab. 263, 269; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 261, 263; consumption 1985-89: (4), Tab. 215; fruits in juices were reallocated to this group, supply via home gardens excluded
Nuts & seeds	4.1	4.0	1.3	0.32	3.6	3.6	0.7	0.18	310	Supply 2006: (5), Tab. 268; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 265; consumption 1985-89: (4), Tab. 215; intake probably underestimated due to nut and seed usage in prepared meals (bakery products etc.)
Potato products	84.9	74.0	30.4	0.36	87.3	73.6	39.6	0.45	69	Supply 2006: (5), Tab. 249; consumption 2006: (5), Tab. 210; supply 1985-89: (4), Tab. 245; consumption 1985-89: (4), Tab. 215
Vegetal oils, margarine (incl. vegetal oils from sweets)	14.9		5.8	0.39	14.2		8.1	0.57	881	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215; intake probably underestimated due to oil and fat usage in prepared meals (bakery products etc.), vegetal oils and fats in sweets were reallocated to this group
Sugar (incl. sugar from grain products, juices and soft drinks)	48.9		27.5	0.56	41.4		19.4	0.47	355	Supply/consumption 2006: (5), Tab. 210; supply/consumption 1985-89: (4), Tab. 215; intake probably underestimated due to sugar usage in prepared meals (fruit preserves etc.), sugar in ice cream, grain products, juices/soft drinks were reallocated to this group

* According to (21)

If between supply and consumption is not distinguished, then no corresponding data were available.

Tab. 2 LCI and LCIA data for **butter** (fat content > 83%)

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	7.74	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	1.37	16
	grassland (domestic)	$m^2\ kg^{-1}$	5.92	1,3,5	CO_2	$kg\ kg^{-1}$	1.37	2,3,5
	arable land (abroad)	$m^2\ kg^{-1}$	3.64	1,3,5	CH_4	$g\ kg^{-1}$	0.11	2,3,5
	grassland (abroad)	$m^2\ kg^{-1}$	3.37	1,3,5	N_2O	$g\ kg^{-1}$	0.00	2,3,5
	Water use (blue)				land use (LU)	$CO_2e\ kg\ kg^{-1}$	1.71	16
	domestic	$l\ kg^{-1}$	63.63	1,3,5	CO_2	$kg\ kg^{-1}$	1.71	2,3,5
	abroad	$l\ kg^{-1}$	16.66	1,3,5	CH_4	$g\ kg^{-1}$	-	
					N_2O	$g\ kg^{-1}$	-	
	Phosphorous use							
	domestic	$g\ kg^{-1}$	50.71	1,3,5	agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	16.17	16
	abroad	$g\ kg^{-1}$	19.31	1,3,5	CO_2 (upstream processes*)	$kg\ kg^{-1}$	2.22	1,3,11
					CO_2 (direct**)	$kg\ kg^{-1}$	1.47	1,3
	Primary energy use				CH_4	$g\ kg^{-1}$	318.95	1,3
	∑ agriculture	$MJ\ kg^{-1}$	57.55		N_2O	$g\ kg^{-1}$	15.14	1,3
	upstream processes*	$MJ\ kg^{-1}$	34.67	1,11	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	13.96	5
	direct**	$MJ\ kg^{-1}$	22.88	1,12	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	5.29	5
	domestic	$MJ\ kg^{-1}$	36.85	1,3,5	**Ammonia emissions**			
	abroad	$MJ\ kg^{-1}$	20.69	1,3,5	domestic	$g\ kg^{-1}$	64.39	1,3,5
					abroad	$g\ kg^{-1}$	18.09	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	4.43	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.22	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	2.16	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.08	9,16
	Water use (blue)	$l\ kg^{-1}$	1.23	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	1.27	9				
Total (cradle-to-store)	**Land use**	m^2/kg	20.68		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	19.75	
	Water use (blue)	$l\ kg^{-1}$	85.95		**Ammonia emissions**	$g\ kg^{-1}$	82.49	
	Phosphorous use	$g\ kg^{-1}$	70.02					
	Primary energy use	$MJ\ kg^{-1}$	64.20					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 3 LCI and LCIA data for **high-fat dairy products** (cheese, cream etc.)

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	3.70	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	0.66	16
	grassland (domestic)	$m^2\ kg^{-1}$	4.44	1,3,5	CO_2	$kg\ kg^{-1}$	0.65	2,3,5
	arable land (abroad)	$m^2\ kg^{-1}$	1.74	1,3,5	CH_4	$g\ kg^{-1}$	0.05	2,3,5
					N_2O	$g\ kg^{-1}$	0.00	2,3,5
	Water use (blue)							
	domestic	$l\ kg^{-1}$	37.58	1,3,5	land use (LU)	$CO_2e\ kg\ kg^{-1}$	0.82	16
	abroad	$l\ kg^{-1}$	0.80	1,3,5	CO_2	$kg\ kg^{-1}$	0.82	2,3,5
					CH_4	$g\ kg^{-1}$	-	
	Phosphorous use				N_2O	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	30.49	1,3,5				
	abroad	$g\ kg^{-1}$	2.98	1,3,5	agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	7.73	16
					CO_2 (upstream processes*)	$kg\ kg^{-1}$	1.06	1,3,11
	Primary energy use				CO_2 (direct**)	$kg\ kg^{-1}$	0.70	1,3
	∑ agriculture	$MJ\ kg^{-1}$	27.51		CH_4	$g\ kg^{-1}$	152.47	1,3
	upstream processes*	$MJ\ kg^{-1}$	16.57	1,11	N_2O	$g\ kg^{-1}$	7.24	1,3
	direct**	$MJ\ kg^{-1}$	10.94	1,12	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	8.27	5
	domestic	$MJ\ kg^{-1}$	26.61	1,3,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.93	5
	abroad	$MJ\ kg^{-1}$	0.90	1,3,5	**Ammonia emissions**			
					domestic	$g\ kg^{-1}$	38.85	1,3,5
					abroad	$g\ kg^{-1}$	0.59	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	4.43	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.22	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	2.16	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.42	9,16
	Water use (blue)	$l\ kg^{-1}$	1.50	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.62	9				
Total (cradle-to-store)	**Land use**	m^2/kg	9.89		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	10.04	
	Water use (blue)	$l\ kg^{-1}$	44.31		**Ammonia emissions**	$g\ kg^{-1}$	39.43	
	Phosphorous use	$g\ kg^{-1}$	33.47					
	Primary energy use	$MJ\ kg^{-1}$	38.52					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 4 LCI and LCIA data for **low-fat dairy products** (milk, yoghurt etc.)

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	m^2 kg^{-1}	0.90	1,3,5	direct land use change (dLUC)	CO2e kg kg^{-1}	0.14	16
	grassland (domestic)	m^2 kg^{-1}	1.09	1,3,5	CO2	kg kg^{-1}	0.14	2,3,5
	arable land (abroad)	m^2 kg^{-1}	0.43	1,3,5	CH4	g kg^{-1}	0.01	2,3,5
					N2O	g kg^{-1}	0.00	2,3,5
	Water use (blue)							
	domestic	l kg^{-1}	10.27	1,3,5	land use (LU)	CO2e kg kg^{-1}	0.17	16
	abroad	l kg^{-1}	0.22	1,3,5	CO2	kg kg^{-1}	0.17	2,3,5
					CH4	g kg^{-1}	-	
	Phosphorous use				N2O	g kg^{-1}	-	
	domestic	g kg^{-1}	7.46	1,3,5				
	abroad	g kg^{-1}	0.73	1,3,5	agriculture (AC)	CO2e kg kg^{-1}	1.64	16
					CO2 (upstream processes*)	kg kg^{-1}	0.23	1,3,11
	Primary energy use				CO2 (direct**)	kg kg^{-1}	0.15	1,3
	∑ agriculture	MJ kg^{-1}	6.80		CH4	g kg^{-1}	32.61	1,3
	upstream processes*	MJ kg^{-1}	4.10	1,11	N2O	g kg^{-1}	1.55	1,3
	direct**	MJ kg^{-1}	2.70	1,12	∑ domestic (dLUC+LU+AC)	CO2e kg kg^{-1}	1.76	5
	domestic	MJ kg^{-1}	6.58	1,3,5	∑ abroad (dLUC+LU+AC)	CO2e kg kg^{-1}	0.20	5
	abroad	MJ kg^{-1}	0.22	1,3,5	**Ammonia emissions**			
					domestic	g kg^{-1}	9.51	1,3,5
					abroad	g kg^{-1}	0.15	1,3,5
Processing	**Water (blue)**	l kg^{-1}	4.43	5,15	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.22	5,9,16
	Primary energy use	MJ kg^{-1}	2.16	5,9	**Ammonia emissions**	g kg^{-1}	0.00	5,9
Trade, transport	**Primary energy use**	MJ kg^{-1}	3.23	5,9,14	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.20	5,9,14,16
			0.00		**Ammonia emissions**	g kg^{-1}	0.00	5,9,14
Packaging	**Land use**	m^2 kg^{-1}	0.01	9	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.36	9,16
	Water use (blue)	l kg^{-1}	0.71	9	**Ammonia emissions**	g kg^{-1}	0.00	9
	Primary energy use	MJ kg^{-1}	1.64	9				
Total (cradle-to-store)	**Land use**	m^2/kg	2.42		**Greenhouse gases emissions**	CO2e kg kg^{-1}	2.74	
	Water use (blue)	l kg^{-1}	15.64		**Ammonia emissions**	g kg^{-1}	9.65	
	Phosphorous use	g kg^{-1}	8.19					
	Primary energy use	MJ kg^{-1}	13.83					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 5 LCI and LCIA data of **vegan milk products**

	Input				Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	0.25	1, 19	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	arable land (abroad)	$m^2\ kg^{-1}$	0.45	1,5,19	CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	0.03	1, 19				
	abroad	$l\ kg^{-1}$	0.06	1,5,19	land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	0.45	1, 19	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	0.80	1,5,19				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.20	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.01	1,11,19
	∑ agriculture	$MJ\ kg^{-1}$	0.36		CO_2 (direct**)	$kg\ kg^{-1}$	0.02	1,19
	upstream processes*	$MJ\ kg^{-1}$	0.08	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	0.28	1,12	N_2O	$g\ kg^{-1}$	0.57	1,19
	domestic	$MJ\ kg^{-1}$	0.13	1,19	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.07	5
	abroad	$MJ\ kg^{-1}$	0.23	1,5,19	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.13	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	0.08	1,5,19
					abroad	$g\ kg^{-1}$	0.13	1,5,19
Processing	**Water (blue)**	$l\ kg^{-1}$	4.43	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.22	5,9,16,19
	Primary energy use	$MJ\ kg^{-1}$	2.16	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9,19
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.12	9,16
	Water use (blue)	$l\ kg^{-1}$	1.83	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	1.73	9				9
Total (cradle-to-store)	**Land use**	m^2/kg	0.71		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.73	
	Water use (blue)	$l\ kg^{-1}$	6.35		**Ammonia emissions**	$g\ kg^{-1}$	0.21	
	Phosphorous use	$g\ kg^{-1}$	1.25					
	Primary energy use	$MJ\ kg^{-1}$	7.48					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 6 LCI and LCIA data of **beef/veal**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	5.36	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	1.47	16
	grassland (domestic)	$m^2\ kg^{-1}$	17.86	1,3,5	CO_2	$kg\ kg^{-1}$	1.46	2,3,5
	arable land (abroad)	$m^2\ kg^{-1}$	2.22	1,3,5	CH_4	$g\ kg^{-1}$	0.15	2,3,5
					N_2O	$g\ kg^{-1}$	0.01	2,3,5
	Water use (blue)							
	domestic	$l\ kg^{-1}$	63.85	1,3,5	land use (LU)	$CO_2e\ kg\ kg^{-1}$	1.53	16
	abroad	$l\ kg^{-1}$	12.51	1,3,5	CO_2	$kg\ kg^{-1}$	1.53	2,3,5
					CH_4	$g\ kg^{-1}$	-	
	Phosphorous use				N_2O	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	94.20	1,3,5				
	abroad	$g\ kg^{-1}$	3.72	1,3,5	agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	14.39	16
					CO_2 (upstream processes*)	$kg\ kg^{-1}$	2.46	1,3,11
	Primary energy use				CO_2 (direct**)	$kg\ kg^{-1}$	1.37	1,3
	∑ agriculture	$MJ\ kg^{-1}$	64.43		CH_4	$g\ kg^{-1}$	204.51	1,3
	upstream processes*	$MJ\ kg^{-1}$	41.45	1,11	N_2O	$g\ kg^{-1}$	18.29	1,3
	direct**	$MJ\ kg^{-1}$	22.98	1,12	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	15.71	5
	domestic	$MJ\ kg^{-1}$	63.59	1,3,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	1.68	5
	abroad	$MJ\ kg^{-1}$	0.85	1,3,5	**Ammonia emissions**			
					domestic	$g\ kg^{-1}$	74.49	1,3,5
					abroad	$g\ kg^{-1}$	0.75	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	6.73	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.58	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	4.66	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.31	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.42	9,16
	Water use (blue)	$l\ kg^{-1}$	1.50	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.62	9				
Total (cradle-to-store)	**Land use**	m^2/kg	25.44		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	18.59	
	Water use (blue)	$l\ kg^{-1}$	84.60		**Ammonia emissions**	$g\ kg^{-1}$	75.24	
	Phosphorous use	$g\ kg^{-1}$	97.92					
	Primary energy use	$MJ\ kg^{-1}$	78.02					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 7 LCI and LCIA data of **pork**

	Input			Reference	Output			Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	6.07	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	0.95	16
	arable land (abroad)	$m^2\ kg^{-1}$	2.83	1,3,5	CO_2	$kg\ kg^{-1}$	0.95	2,3,5
					CH_4	$g\ kg^{-1}$	0.09	2,3,5
	Water use (blue)				N_2O	$g\ kg^{-1}$	0.00	2,3,5
	domestic	$l\ kg^{-1}$	15.60	1,3,5				
	abroad	$l\ kg^{-1}$	5.84	1,3,5	land use (LU)	$CO_2e\ kg\ kg^{-1}$	1.59	16
					CO_2	$kg\ kg^{-1}$	1.59	2,3,5
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	16.79	1,3,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	5.39	1,3,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	4.21	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	1.26	1,3,11
	∑ agriculture	$MJ\ kg^{-1}$	35.75		CO_2 (direct**)	$kg\ kg^{-1}$	0.63	1,3
	upstream processes*	$MJ\ kg^{-1}$	23.87	1,11	CH_4	$g\ kg^{-1}$	30.60	1,3
	direct**	$MJ\ kg^{-1}$	11.87	1,12	N_2O	$g\ kg^{-1}$	5.20	1,3
	domestic	$MJ\ kg^{-1}$	26.83	1,3,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	4.58	5
	abroad	$MJ\ kg^{-1}$	8.92	1,3,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	2.17	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	30.73	1,3,5
					abroad	$g\ kg^{-1}$	2.69	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	6.73	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.58	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	4.66	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.31	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.42	9,16
	Water use (blue)	$l\ kg^{-1}$	1.50	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.62	9				
Total (cradle-to-store)	**Land use**	m^2/kg	8.91		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	7.95	
	Water use (blue)	$l\ kg^{-1}$	29.67		**Ammonia emissions**	$g\ kg^{-1}$	33.43	
	Phosphorous use	$g\ kg^{-1}$	22.18					
	Primary energy use	$MJ\ kg^{-1}$	49.34					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 8 LCI and LCIA data of **poultry**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	m^2 kg^{-1}	4.03	1,3,5	direct land use change (dLUC)	CO2e kg kg^{-1}	0.59	16
	arable land (abroad)	m^2 kg^{-1}	2.20	1,3,5	CO2	kg kg^{-1}	0.59	2,3,5
					CH4	g kg^{-1}	0.05	2,3,5
	Water use (blue)				N2O	g kg^{-1}	0.00	2,3,5
	domestic	l kg^{-1}	4.56	1,3,5				
	abroad	l kg^{-1}	2.44	1,3,5	land use (LU)	CO2e kg kg^{-1}	1.30	16
					CO2	kg kg^{-1}	1.30	2,3,5
	Phosphorous use				CH4	g kg^{-1}	-	
	domestic	g kg^{-1}	11.19	1,3,5	N2O	g kg^{-1}	-	
	abroad	g kg^{-1}	4.83	1,3,5				
					agriculture (AC)	CO2e kg kg^{-1}	2.76	16
	Primary energy use				CO2 (upstream processes*)	kg kg^{-1}	1.22	1,3,11
	∑ agriculture	MJ kg^{-1}	29.24		CO2 (direct**)	kg kg^{-1}	0.36	1,3
	upstream processes*	MJ kg^{-1}	22.64	1,11	CH4	g kg^{-1}	2.23	1,3
	direct**	MJ kg^{-1}	6.60	1,12	N2O	g kg^{-1}	3.79	1,3
	domestic	MJ kg^{-1}	19.37	1,3,5	∑ domestic (dLUC+LU+AC)	CO2e kg kg^{-1}	2.95	5
	abroad	MJ kg^{-1}	9.87	1,3,5	∑ abroad (dLUC+LU+AC)	CO2e kg kg^{-1}	1.71	5
					Ammonia emissions			
					domestic	g kg^{-1}	19.73	1,3,5
					abroad	g kg^{-1}	4.42	1,3,5
Processing	**Water (blue)**	l kg^{-1}	6.73	5,15	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.58	5,9,16
	Primary energy use	MJ kg^{-1}	4.66	5,9	**Ammonia emissions**	g kg^{-1}	0.00	5,9
Trade, transport	**Primary energy use**	MJ kg^{-1}	3.31	5,9,14	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.20	5,9,14,16
					Ammonia emissions	g kg^{-1}	0.00	5,9,14
Packaging	**Land use**	m^2 kg^{-1}	0.01	9	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.42	9,16
	Water use (blue)	l kg^{-1}	1.50	9	**Ammonia emissions**	g kg^{-1}	0.00	9
	Primary energy use	MJ kg^{-1}	5.62	9				
Total (cradle-to-store)	**Land use**	m^2/kg	6.24		**Greenhouse gases emissions**	CO2e kg kg^{-1}	5.86	
	Water use (blue)	l kg^{-1}	15.23		**Ammonia emissions**	g kg^{-1}	24.15	
	Phosphorous use	g kg^{-1}	16.03					
	Primary energy use	MJ kg^{-1}	42.83					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 9 LCI and LCIA data of **other meat** (sheep, goat, horse, deer etc.)

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	6.56	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	1.41	16
	grassland (domestic)	$m^2\ kg^{-1}$	9.36	1,3,5	CO_2	$kg\ kg^{-1}$	1.40	2,3,5
	arable land (abroad)	$m^2\ kg^{-1}$	3.95	1,3,5	CH_4	$g\ kg^{-1}$	0.15	2,3,5
					N_2O	$g\ kg^{-1}$	0.01	2,3,5
	Water use (blue)							
	domestic	$l\ kg^{-1}$	84.82	1,3,5	land use (LU)	$CO_2e\ kg\ kg^{-1}$	0.36	16
	abroad	$l\ kg^{-1}$	3.52	1,3,5	CO_2	$kg\ kg^{-1}$	0.36	2,3,5
					CH_4	$g\ kg^{-1}$	-	
	Phosphorous use				N_2O	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	61.65	1,3,5				
	abroad	$g\ kg^{-1}$	6.46	1,3,5	agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	14.28	16
					CO_2 (upstream processes*)	$kg\ kg^{-1}$	1.59	1,3,11
	Primary energy use				CO_2 (direct**)	$kg\ kg^{-1}$	1.63	1,3
	∑ agriculture	$MJ\ kg^{-1}$	55.94		CH_4	$g\ kg^{-1}$	268.28	1,3
	upstream processes*	$MJ\ kg^{-1}$	27.64	1,11	N_2O	$g\ kg^{-1}$	14.59	1,3
	direct**	$MJ\ kg^{-1}$	28.30	1,12	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	8.47	5
	domestic	$MJ\ kg^{-1}$	32.36	1,3,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	7.58	5
	abroad	$MJ\ kg^{-1}$	23.58	1,3,5	**Ammonia emissions**			
					domestic	$g\ kg^{-1}$	99.48	1,3,5
					abroad	$g\ kg^{-1}$	1.01	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	6.73	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.58	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	4.66	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.31	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.42	9,16
	Water use (blue)	$l\ kg^{-1}$	1.50	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.62	9				
Total (cradle-to-store)	**Land use**	m^2/kg	19.88		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	17.24	
	Water use (blue)	$l\ kg^{-1}$	96.58		**Ammonia emissions**	$g\ kg^{-1}$	100.49	
	Phosphorous use	$g\ kg^{-1}$	68.11					
	Primary energy use	$MJ\ kg^{-1}$	69.53					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 10 LCI and LCIA data of **eggs** (shell weight)

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	3.47	1,3,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	0.16	16
	arable land (abroad)	$m^2\ kg^{-1}$	0.31	1,3,5	CO_2	$kg\ kg^{-1}$	0.16	2,3,5
					CH_4	$g\ kg^{-1}$	0.01	2,3,5
	Water use (blue)				N_2O	$g\ kg^{-1}$	0.00	2,3,5
	domestic	$l\ kg^{-1}$	6.21	1,3,5				
	abroad	$l\ kg^{-1}$	0.81	1,3,5	land use (LU)	$CO_2e\ kg\ kg^{-1}$	0.84	16
					CO_2	$kg\ kg^{-1}$	0.84	2,3,5
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	9.52	1,3,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	0.80	1,3,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	1.66	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.63	1,3,11
	∑ agriculture	$MJ\ kg^{-1}$	17.40		CO_2 (direct**)	$kg\ kg^{-1}$	0.21	1,3
	upstream processes*	$MJ\ kg^{-1}$	13.12	1,11	CH_4	$g\ kg^{-1}$	1.45	1,3
	direct**	$MJ\ kg^{-1}$	4.29	1,12	N_2O	$g\ kg^{-1}$	2.65	1,3
	domestic	$MJ\ kg^{-1}$	11.05	1,3,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	1.59	5
	abroad	$MJ\ kg^{-1}$	6.36	1,3,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	1.07	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	19.14	1,3,5
					abroad	$g\ kg^{-1}$	0.57	1,3,5
Processing	**Water (blue)**	$l\ kg^{-1}$	-	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.07	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	0.55	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.45	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.02	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.18	9,16
	Water use (blue)	$l\ kg^{-1}$	1.75	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	2.98	9				
Total (cradle-to-store)	**Land use**	m^2/kg	3.80		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	3.11	
	Water use (blue)	$l\ kg^{-1}$	8.77		**Ammonia emissions**	$g\ kg^{-1}$	19.71	
	Phosphorous use	$g\ kg^{-1}$	10.32					
	Primary energy use	$MJ\ kg^{-1}$	24.39					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 11 LCI and LCIA data of **fish/shellfish**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	0.04	8,20	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	arable land (abroad)	$m^2\ kg^{-1}$	0.13	8,20	CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	0.00	8,20				
	abroad	$l\ kg^{-1}$	0.00	8,20	land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	1.09	8,20	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	3.30	8,20				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	1.29	16
	Primary energy use				CO_2 (upstream* + direct**)	$kg\ kg^{-1}$	1.19	8
	∑ agriculture	$MJ\ kg^{-1}$	0.22		CH_4	$g\ kg^{-1}$	1.51	8
	upstream processes*	$MJ\ kg^{-1}$	-		N_2O	$g\ kg^{-1}$	0.24	8
	direct**	$MJ\ kg^{-1}$	-		∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.33	20
	domestic	$MJ\ kg^{-1}$	0.05	8,20	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.97	20
	abroad	$MJ\ kg^{-1}$	0.16	8,20	**Ammonia emissions**			
					domestic	$g\ kg^{-1}$	0.06	8,20
					abroad	$g\ kg^{-1}$	0.17	8,20
Processing	**Water (blue)**	$l\ kg^{-1}$	9.13	15,20	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.51	5,16,20
	Primary energy use	$MJ\ kg^{-1}$	4.40	5,20	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,20
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.21	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,20
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.37	9,16
	Water use (blue)	$l\ kg^{-1}$	5.58	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.26	9				
Total (cradle-to-store)	**Land use**	m^2/kg	0.17		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	2.39	
	Water use (blue)	$l\ kg^{-1}$	14.71		**Ammonia emissions**	$g\ kg^{-1}$	0.23	
	Phosphorous use	$g\ kg^{-1}$	4.39					
	Primary energy use	$MJ\ kg^{-1}$	13.10					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 12 LCI and LCIA data of **grain products**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	1.78	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	0.01	16
	arable land (abroad)	$m^2\ kg^{-1}$	-		CO_2	$kg\ kg^{-1}$	0.01	3
					CH_4	$g\ kg^{-1}$	0.00	3
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	0.40	1,5				
	abroad	$l\ kg^{-1}$	-		land use (LU)	$CO_2e\ kg\ kg^{-1}$	0.07	16
					CO_2	$kg\ kg^{-1}$	0.07	3
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	5.26	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	-					
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.59	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.13	1,11
	∑ agriculture	$MJ\ kg^{-1}$	2.66		CO_2 (direct**)	$kg\ kg^{-1}$	0.06	1,5
	upstream processes*	$MJ\ kg^{-1}$	1.79	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	0.88	1,12	N_2O	$g\ kg^{-1}$	1.34	1,5
	domestic	$MJ\ kg^{-1}$	2.66	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.68	5
	abroad	$MJ\ kg^{-1}$	-		∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	-	
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	1.94	1,5
					abroad	$g\ kg^{-1}$	-	
Processing	**Water (blue)**	$l\ kg^{-1}$	3.75	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.56	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	4.61	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.09	9,16
	Water use (blue)	$l\ kg^{-1}$	1.09	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	1.36	9				
Total (cradle-to-store)	**Land use**	m^2/kg	1.78		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	1.52	
	Water use (blue)	$l\ kg^{-1}$	5.24		**Ammonia emissions**	$g\ kg^{-1}$	1.94	
	Phosphorous use	$g\ kg^{-1}$	5.26					
	Primary energy use	$MJ\ kg^{-1}$	11.86					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 13 LCI and LCIA data of **vegetables**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable land (domestic)	$m^2\ kg^{-1}$	0.17	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	arable land (abroad)	$m^2\ kg^{-1}$	0.27	1,5,18	CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	4.90	1,5				
	abroad	$l\ kg^{-1}$	14.00	1,5,10	land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	1.16	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	1.55	1,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.33	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.09	1,11
	∑ agriculture	$MJ\ kg^{-1}$	4.33		CO_2 (direct**)	$kg\ kg^{-1}$	0.11	1
	upstream processes*	$MJ\ kg^{-1}$	2.01	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	2.32	1,12	N_2O	$g\ kg^{-1}$	0.43	1
	domestic	$MJ\ kg^{-1}$	1.56	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.12	5
	abroad	$MJ\ kg^{-1}$	2.77	1,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.21	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	0.28	1,5
					abroad	$g\ kg^{-1}$	0.38	1,5
Processing	**Water (blue)**	$l\ kg^{-1}$	7.44	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.04	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	0.36	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	4.34	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.28	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.19	9,16
	Water use (blue)	$l\ kg^{-1}$	1.04	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	2.22	9				
Total (cradle-to-store)	**Land use**	m^2/kg	0.45		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.84	
	Water use (blue)	$l\ kg^{-1}$	27.38		**Ammonia emissions**	$g\ kg^{-1}$	0.66	
	Phosphorous use	$g\ kg^{-1}$	2.71					
	Primary energy use	$MJ\ kg^{-1}$	11.24					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 14 LCI and LCIA data of **legumes**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	permanent crop (domesti	$m^2\ kg^{-1}$	0.76	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	permanent crop (abroad)	$m^2\ kg^{-1}$	1.35	1,5,18	CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	0.10	1,5				
	abroad	$l\ kg^{-1}$	0.18	1,5,10	land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	1.35	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	2.40	1,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.60	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.02	1,11
	∑ agriculture	$MJ\ kg^{-1}$	1.09		CO_2 (direct**)	$kg\ kg^{-1}$	0.07	1
	upstream processes*	$MJ\ kg^{-1}$	0.25	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	0.85	1,12	N_2O	$g\ kg^{-1}$	1.71	1
	domestic	$MJ\ kg^{-1}$	0.39	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.21	5
	abroad	$MJ\ kg^{-1}$	0.70	1,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.38	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	0.23	1,5
					abroad	$g\ kg^{-1}$	0.40	1,5
Processing	**Water (blue)**	$l\ kg^{-1}$	7.44	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.04	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	0.36	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	4.34	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.28	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.19	9,16
	Water use (blue)	$l\ kg^{-1}$	1.04	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	2.22	9				
Total (cradle-to-store)	**Land use**	m^2/kg	2.11		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	1.10	
	Water use (blue)	$l\ kg^{-1}$	8.75		**Ammonia emissions**	$g\ kg^{-1}$	0.63	
	Phosphorous use	$g\ kg^{-1}$	3.75					
	Primary energy use	$MJ\ kg^{-1}$	8.01					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 15 LCI and LCIA data of **fruits**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	permanent crop (domesti	$m^2\ kg^{-1}$	0.16	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	permanent crop (abroad)	$m^2\ kg^{-1}$	0.70	1,5,18	CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	0.39	1,5				
	abroad	$l\ kg^{-1}$	78.76	1,5,10	land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	0.12	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	1.29	1,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.35	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.11	1,11,13
	∑ agriculture	$MJ\ kg^{-1}$	6.04		CO_2 (direct**)	$kg\ kg^{-1}$	0.09	1,13
	upstream processes*	$MJ\ kg^{-1}$	3.29	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	2.74	1,12	N_2O	$g\ kg^{-1}$	0.49	1,13
	domestic	$MJ\ kg^{-1}$	0.66	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.04	5
	abroad	$MJ\ kg^{-1}$	5.38	1,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.31	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	0.11	1,5
					abroad	$g\ kg^{-1}$	0.51	1,5
Processing	**Water (blue)**	$l\ kg^{-1}$	7.44	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.04	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	0.36	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.93	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.25	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.19	9,16
	Water use (blue)	$l\ kg^{-1}$	1.04	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	2.22	9				
Total (cradle-to-store)	**Land use**	m^2/kg	0.86		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.83	
	Water use (blue)	$l\ kg^{-1}$	87.62		**Ammonia emissions**	$g\ kg^{-1}$	0.62	
	Phosphorous use	$g\ kg^{-1}$	1.42					
	Primary energy use	$MJ\ kg^{-1}$	12.55					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 16 LCI and LCIA data of **nuts/seeds**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	permanent crop (domesti	m^2 kg^{-1}	0.16	1,5	direct land use change (dLUC)	CO2e kg kg^{-1}	-	
	permanent crop (abroad)	m^2 kg^{-1}	2.40	1,5,18	CO2	kg kg^{-1}	-	
	arable (domestic)	m^2 kg^{-1}	0.11	1,5	CH4	g kg^{-1}	-	
	arable (abroad)	m^2 kg^{-1}	0.24	1,5,18	N2O	g kg^{-1}	-	
	Water use (blue)				land use (LU)	CO2e kg kg^{-1}	-	
	domestic	l kg^{-1}	0.47	1,5	CO2	kg kg^{-1}	-	
	abroad	l kg^{-1}	1416.33	1,5,10	CH4	g kg^{-1}	-	
					N2O	g kg^{-1}	-	
	Phosphorous use							
	domestic	g kg^{-1}	0.12	1,5	agriculture (AC)	CO2e kg kg^{-1}	0.35	16
	abroad	g kg^{-1}	1.29	1,5	CO2 (upstream processes*)	kg kg^{-1}	0.11	1,11,13
					CO2 (direct**)	kg kg^{-1}	0.09	1,13
	Primary energy use				CH4	g kg^{-1}	-	
	∑ agriculture	MJ kg^{-1}	6.04		N2O	g kg^{-1}	0.49	1,13
	upstream processes*	MJ kg^{-1}	3.29	1,11	∑ domestic (dLUC+LU+AC)	CO2e kg kg^{-1}	0.03	5
	direct**	MJ kg^{-1}	2.74	1,12	∑ abroad (dLUC+LU+AC)	CO2e kg kg^{-1}	0.32	5
	domestic	MJ kg^{-1}	0.53	1,5	**Ammonia emissions**			
	abroad	MJ kg^{-1}	5.51	1,5	domestic	g kg^{-1}	0.05	1,5
					abroad	g kg^{-1}	0.56	1,5
Processing	**Water (blue)**	l kg^{-1}	7.44	5,15	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.04	5,9,16
	Primary energy use	MJ kg^{-1}	0.36	5,9	**Ammonia emissions**	g kg^{-1}	0.00	5,9
Trade, transport	**Primary energy use**	MJ kg^{-1}	3.93	5,9,14	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.25	5,9,14,16
					Ammonia emissions	g kg^{-1}	0.00	5,9,14
Packaging	**Land use**	m^2 kg^{-1}	0.01	9	**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.19	9,16
	Water use (blue)	l kg^{-1}	1.04	9	**Ammonia emissions**	g kg^{-1}	0.00	9
	Primary energy use	MJ kg^{-1}	2.22	9				
Total (cradle-to-store)	**Land use**	m^2/kg	2.91		**Greenhouse gases emissions**	CO2e kg kg^{-1}	0.83	
	Water use (blue)	l kg^{-1}	1425.28		**Ammonia emissions**	g kg^{-1}	0.62	
	Phosphorous use	g kg^{-1}	1.42					
	Primary energy use	MJ kg^{-1}	12.55					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 17 LCI and LCIA data of **potato products**

Input					Output			
				Reference				Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable (domestic)	$m^2\ kg^{-1}$	0.29	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	arable (abroad)	$m^2\ kg^{-1}$	-		CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	1.37	1,5				
	abroad	$l\ kg^{-1}$	-		land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	0.87	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	-					
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.10	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.03	1,11
	∑ agriculture	$MJ\ kg^{-1}$	0.62		CO_2 (direct**)	$kg\ kg^{-1}$	0.01	1
	upstream processes*	$MJ\ kg^{-1}$	0.41	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	0.22	1,12	N_2O	$g\ kg^{-1}$	0.21	1
	domestic	$MJ\ kg^{-1}$	0.62	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.10	5
	abroad	$MJ\ kg^{-1}$	-		∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	-	
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	0.33	1,5
					abroad	$g\ kg^{-1}$	-	
Processing	**Water (blue)**	$l\ kg^{-1}$	3.62	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.13	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	1.31	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	1.81	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.20	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.10	9,16
	Water use (blue)	$l\ kg^{-1}$	0.75	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	1.38	9				
Total (cradle-to-store)	**Land use**	m^2/kg	0.30		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.53	
	Water use (blue)	$l\ kg^{-1}$	5.74		**Ammonia emissions**	$g\ kg^{-1}$	0.34	
	Phosphorous use	$g\ kg^{-1}$	0.87					
	Primary energy use	$MJ\ kg^{-1}$	5.12					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 18 LCI and LCIA data of **vegetal oils/fats**

	Input			Reference	Output			Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable (domestic)	$m^2\ kg^{-1}$	1.55	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	1.08	16
	arable (abroad)	$m^2\ kg^{-1}$	2.58	1,5,18	CO_2	$kg\ kg^{-1}$	1.07	3,9
					CH_4	$g\ kg^{-1}$	0.17	3,9
	Water use (blue)				N_2O	$g\ kg^{-1}$	0.01	3,9
	domestic	$l\ kg^{-1}$	0.22	1,5				
	abroad	$l\ kg^{-1}$	3.38	1,5,10	land use (LU)	$CO_2e\ kg\ kg^{-1}$	0.43	16
					CO_2	$kg\ kg^{-1}$	0.43	3,9
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	3.88	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	5.85	1,5				
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.82	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.13	1,9,11
	∑ agriculture	$MJ\ kg^{-1}$	6.73		CO_2 (direct**)	$kg\ kg^{-1}$	0.22	1,9
	upstream processes*	$MJ\ kg^{-1}$	2.52	1,11	CH_4	$g\ kg^{-1}$	0.32	1,9
	direct**	$MJ\ kg^{-1}$	4.21	1,12	N_2O	$g\ kg^{-1}$	1.57	1,9
	domestic	$MJ\ kg^{-1}$	2.02	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.43	5
	abroad	$MJ\ kg^{-1}$	4.71	1,5	∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	1.90	5
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	2.11	1,5
					abroad	$g\ kg^{-1}$	1.23	1,5
Processing	**Water (blue)**	$l\ kg^{-1}$	7.68	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.37	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	4.73	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	3.27	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.26	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.46	9,16
	Water use (blue)	$l\ kg^{-1}$	4.41	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	5.17	9				
Total (cradle-to-store)	**Land use**	m^2/kg	4.14		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	3.43	
	Water use (blue)	$l\ kg^{-1}$	15.69		**Ammonia emissions**	$g\ kg^{-1}$	3.34	
	Phosphorous use	$g\ kg^{-1}$	9.73					
	Primary energy use	$MJ\ kg^{-1}$	19.91					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

Tab. 19 LCI and LCIA data of **sugar**

	Input			Reference	Output			Reference
Agricultural production	**Land use**				**Greenhouse gases emissions**			
	arable (domestic)	$m^2\ kg^{-1}$	1.14	1,5	direct land use change (dLUC)	$CO_2e\ kg\ kg^{-1}$	-	
	arable (abroad)	$m^2\ kg^{-1}$	-		CO_2	$kg\ kg^{-1}$	-	
					CH_4	$g\ kg^{-1}$	-	
	Water use (blue)				N_2O	$g\ kg^{-1}$	-	
	domestic	$l\ kg^{-1}$	6.11	1,5				
	abroad	$l\ kg^{-1}$	-		land use (LU)	$CO_2e\ kg\ kg^{-1}$	-	
					CO_2	$kg\ kg^{-1}$	-	
	Phosphorous use				CH_4	$g\ kg^{-1}$	-	
	domestic	$g\ kg^{-1}$	3.58	1,5	N_2O	$g\ kg^{-1}$	-	
	abroad	$g\ kg^{-1}$	-					
					agriculture (AC)	$CO_2e\ kg\ kg^{-1}$	0.42	16
	Primary energy use				CO_2 (upstream processes*)	$kg\ kg^{-1}$	0.12	1,11
	∑ agriculture	$MJ\ kg^{-1}$	2.56		CO_2 (direct**)	$kg\ kg^{-1}$	0.05	1
	upstream processes*	$MJ\ kg^{-1}$	1.81	1,11	CH_4	$g\ kg^{-1}$	-	
	direct**	$MJ\ kg^{-1}$	0.75	1,12	N_2O	$g\ kg^{-1}$	0.84	1
	domestic	$MJ\ kg^{-1}$	2.56	1,5	∑ domestic (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	0.42	5
	abroad	$MJ\ kg^{-1}$	-		∑ abroad (dLUC+LU+AC)	$CO_2e\ kg\ kg^{-1}$	-	
					Ammonia emissions			
					domestic	$g\ kg^{-1}$	1.51	1,5
					abroad	$g\ kg^{-1}$	-	
Processing	**Water (blue)**	$l\ kg^{-1}$	1.12	5,15	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.99	5,9,16
	Primary energy use	$MJ\ kg^{-1}$	11.13	5,9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	5,9
Trade, transport	**Primary energy use**	$MJ\ kg^{-1}$	0.23	5,9,14	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.02	5,9,14,16
					Ammonia emissions	$g\ kg^{-1}$	0.00	5,9,14
Packaging	**Land use**	$m^2\ kg^{-1}$	0.01	9	**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	0.46	9,16
	Water use (blue)	$l\ kg^{-1}$	2.24	9	**Ammonia emissions**	$g\ kg^{-1}$	0.00	9
	Primary energy use	$MJ\ kg^{-1}$	4.68	9				
Total (cradle-to-store)	**Land use**	m^2/kg	1.15		**Greenhouse gases emissions**	$CO_2e\ kg\ kg^{-1}$	1.90	
	Water use (blue)	$l\ kg^{-1}$	9.47		**Ammonia emissions**	$g\ kg^{-1}$	1.52	
	Phosphorous use	$g\ kg^{-1}$	3.58					
	Primary energy use	$MJ\ kg^{-1}$	18.60					

* upstream processes include: fertilizer and pesticide production, construction and use of machinery and buildings

** direct energy use on farm (fuels, electricity)

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