



N CHAIN STARTING WITH N FERTILIZER TO PRODUCE CEREAL TO PRODUCE MAIZE COBS FOR BIOETHANOL AND CATTLE DAIRY  
 AND CONTINUING WITH LIQUID CATTLE MANURE TO PRODUCE WINTER WHEAT FOR CATTLE DAIRY

Year	Fertilizer/manure #	Store 1/0	Amounts Store 1/0	Field	Or-ganic 1/0	Nnorm propor-tion, %	Crop #	Cereal benefit 1/0	Straw used 1/0	Crop use & leach	Use #	Food Fed	N crop #71-61	Fuel/other #9	Manure handling #	Final N a-mounts	N2O-N emission IPCC 1996	N2O-N emission IPCC 2006	Total	
Total N																	1.61	3.72	1.42	2.12
Year N NH3																	0.10	0.10	0.10	Note 45
1-10 N leach																	2.01	0.60	0.60	Note 45
RATIO OF N2O-N TO N IN FIRST CROP ACCORDING TO FIRST YEAR TOTAL IPCC 1996 0.1034 IPCC 2006 0.0707 TOTAL 0.1242																				

N2O-N in food/beverage/fuel/other

Year	N	Vol/NH3	N	NO	100.0	0	100	59	0	0	0	8.7	0.0	0.0	0.0	21	21.3	1.37	3.10	1.20	1.75
1	Year	N	leach	1.022	1.000	0.0	100.00	MCB	2.2	NON	1.000	0.83	0.0	0.0	0.0	21	1.7	0.04	0.125	0.04	0.1000
Year	N	leach	0	19.9	0	100	11	0	0	0	0.693	2	10.1	10.1	Liquid	0.0	0.0	1.70	0.0010	0.51	0.0050
2	Year	N	leach	0.933	1.016	0.0	100.00	WWH	5.0	NON	1.000	0.67	0.0	0.0	0.0	21	3.2	0.21	0.53	0.18	0.32
Year	N	leach	0	3.0	0	100	11	0	0	0	0.720	2	1.5	1.5	Liquid	0.0	0.0	0.27	0.0010	0.08	0.0050
3	Year	N	leach	0.933	1.016	0.0	100.00	WWH	0.7	NON	1.000	0.67	0.0	0.0	0.0	21	0.5	0.03	0.08	0.03	0.05
Year	N	leach	0	0.4	0	100	1	0	0	0	0.720	2	0.2	0.2	Liquid	0.0	0.0	0.01	0.0125	0.01	0.0100
4	Year	N	leach	0.933	1.016	0.0	100.00	SBA	0.1	NON	1.000	0.65	0.0	0.0	0.0	21	0.1	0.00	0.01	0.00	0.01
Year	N	leach	0	0.1	0	100	10	0	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.01	0.00	0.00	0.0100
5	Year	N	leach	0.933	1.016	0.0	100.00	WBA	0.0	NON	1.000	0.66	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	59	0	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050
6	Year	N	leach	0.933	1.016	0.0	100.00	MCB	0.0	NON	1.000	0.83	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	11	0	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050
7	Year	N	leach	0.933	1.016	0.0	100.00	WWH	0.0	NON	1.000	0.67	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	11	0	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050
8	Year	N	leach	0.933	1.016	0.0	100.00	WWH	0.0	NON	1.000	0.67	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	1000	1	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050
9	Year	N	leach	0.933	1.016	0.0	100.00	SBA	0.0	NON	1.000	0.65	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	1000	10	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050
10	Year	N	leach	0.933	1.016	0.0	100.00	WBA	0.0	NON	1.000	0.66	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.00
Year	N	leach	0	0.0	0	100	1000	2	0	0	0.720	2	0.0	0.0	0.0	21	0.0	0.00	0.00	0.00	0.0050

Year 1 0.71 0.12 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Area with crop, ha 0.71 0.12 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 0.71 0.12 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Total IPCC and non IPCC N2O 3.72 2.12 Note 51  
 Total anthropogenic 3.72 2.12 Note 51  
 Total including natural 4.58 2.97 Note 51

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH SEPARATED CATTLE MANURE TO PRODUCE

Year Fertilizer/manure # Store Amounts Field Name 1/0 Or-ganic 1/0 Nnorm propor-tion, % Crop use & leach Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #72 Food #73 Fuel/ other #9 Manure handling # Name Final N a- mounts N2O-N emission IPCC 1996 N2O-N emission IPCC 2006 Total Each Total Note 43 Note 43 Note 44 Note 44 Note 44

Total N	RATIO OF N2O-N TO N IN FIRST CROP										TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED													
Year N NH3	1	0	100.0	2.2	NON	0	100	59	0	0	0	97.8	21	30.0	8.7	0.0	0.0	0.0	22	21.3	1.56	3.97	1.43	2.13
1-10 N leach			0.0	1.022	1.000	ORG	1.00	1.000	0.693	0.0	0.0	67.8	Cattle	0.83					10.1	Sep	1.1	0.03	0.0125	0.03
	2	0	20.5	20.5	0	100	11	1.000	0.740	0.0	0.0	15.4	Dairy	2	4.0	0.9	0.0	0.0	22	3.1	0.24	0.58	0.19	0.33
	2	0	0.867	1.016	5.1	NON	100.00	WWH	1.000	NO	0	11.4	Cattle	0.67	0.67				0.0	Cattle	0.2	0.05	0.0125	0.05
	2	0	3.0	3.0	0	100	11	1.000	0.740	0.0	0.0	11.4	Dairy	2	0.6	0.1	0.0	0.0	22	0.4	0.03	0.08	0.09	0.05
	3	0	0.867	1.016	0.7	NON	100.00	WWH	1.000	NO	0	1.6	Cattle	0.67	0.67				0.0	Cattle	0.0	0.01	0.0125	0.01
	2	0	0.4	0.4	0.4	0	100	1	0.740	0.0	0.0	1.6	Dairy	2	0.1	0.0	0.0	0.0	22	0.0	0.04	0.105	0.01	0.0050
	4	0	0.867	1.016	0.1	NON	100.00	SBA	1.000	NO	0	0.2	Cattle	0.65	0.65				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.1	0.1	0.1	0	100	10	0.740	0.0	0.0	0.2	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.01	0.105	0.00	0.0050
	5	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Cattle	0.66	0.66				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
	6	0	0.867	1.016	0.0	NON	100.00	MCB	1.000	NO	0	0.0	Cattle	0.83	0.83				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.0	0.0	0.0	0	100	11	0.740	0.0	0.0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
	7	0	0.867	1.016	0.0	NON	100.00	WWH	1.000	NO	0	0.0	Cattle	0.67	0.67				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.867	1.016	0.0	NON	100.00	WWH	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
	8	0	0.867	1.016	0.0	NON	100.00	WWH	1.000	NO	0	0.0	Cattle	0.67	0.67				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
	9	0	0.867	1.016	0.0	NON	100.00	SBA	1.000	NO	0	0.0	Cattle	0.65	0.65				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
	10	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Cattle	0.66	0.66				0.0	Cattle	0.0	0.00	0.0125	0.00
	2	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050

N2O-N in food/beverage/fuel/other 0.4027

Year	N	1	0	100.0	2.2	NON	0	100	59	0	0	0	97.8	21	30.0	8.7	0.0	0.0	0.0	22	21.3	1.56	3.29	1.21	1.75
1	Vol/NH3	N	NO	0.0	1.022	1.000	ORG	1.00	1.000	0.693	0.0	0.0	67.8	Cattle	0.83					10.1	Sep	1.1	0.03	0.0125	0.03
Year	N	22	0	20.5	20.5	0	100	11	1.000	0.740	0.0	0.0	15.4	Dairy	2	4.0	0.9	0.0	0.0	22	3.1	0.24	0.58	0.19	0.33
2	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	11.4	Cattle	0.67	0.67				0.0	Cattle	0.2	0.05	0.0125	0.05
Year	N	22	0	3.0	3.0	0	100	11	1.000	0.740	0.0	0.0	11.4	Dairy	2	0.6	0.1	0.0	0.0	22	0.4	0.03	0.08	0.09	0.05
3	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	1.6	Cattle	0.67	0.67				0.0	Cattle	0.0	0.01	0.0125	0.01
Year	N	22	0	0.4	0.4	0	100	1	1.000	0.740	0.0	0.0	1.6	Dairy	2	0.1	0.0	0.0	0.0	22	0.0	0.04	0.105	0.01	0.0050
4	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.2	Cattle	0.65	0.65				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.1	0.1	0	100	10	1.000	0.740	0.0	0.0	0.2	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.01	0.105	0.00	0.0050
5	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.66	0.66				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
6	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.83	0.83				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.0	0.0	0.0	0	100	11	0.740	0.0	0.0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
7	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.67	0.67				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.867	1.016	0.0	NON	100.00	WWH	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
8	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.67	0.67				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
9	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.65	0.65				0.0	Cattle	0.0	0.00	0.0125	0.00
Year	N	22	0	0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050
10	Vol/NH3	Cattle	NO	0.0	0.867	1.016	ORG	1.00	1.000	0.740	0.0	0.0	0.0	Cattle	0.66	0.66				0.0	Cattle	0.0	0.00	0.0125	0.00
	N leach	Sep		0.867	1.016	0.0	NON	100.00	WBA	1.000	NO	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	22	0.0	0.00	0.0125	0.00	0.0050

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.11 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.84 1.18 Note 50

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 0.71

Total IPCC and non IPCC N2O 3.97  
 Total anthropogenic 3.97  
 Total including natural 4.81  
 Note 51 Note 51 Note 51 Note 51

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH CATTLE DEEP LITTER TO PRODUCE

Year	Fertilizer/manure #	Store Name	1/0	Field	Or-ganic	Nnorm	Crop	Straw	Cereal	benefit	1/0	1/0	Use #	Food	Fed	Uses	N crop	Fuel/	Manure	Final	N2O-N emission	N2O-N emission	Total	Total
						proportion, %	use & leach	used	benefit				#	Food	Fed	#21-61	#71/	other	# Name	N a-	IPCC 1996	IPCC 2006	Each	Total
TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED																							9.6	9.2
TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3																							10.2	9.8
TOTAL N AMOUNTS IN KG AND % LEACHED																							83.8	80.9
TOTAL N AMOUNTS IN KG AND %																							103.6	100.0

N2O-N in food/beverage/fuel/other

Year	N	1	0	100.0	100.0	0	100	59	0	0	0	97.8	21	30.0	8.7	0.0	0.0	0.0	0.0	23	21.3	1.75	3.48	1.20	1.75
1	Vol/NH3	N	NO	0.0	1.000	NO	100.00	MCB	1.000	NO	0.0	67.8	Cattle	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.0125	0.03	0.03
Year	N	23	0	23.2	0	0	100	11	0.693	0.0	0	17.4	21	2	0.0	0.0	0.0	0.0	23	0.0	1.70	0.0200	0.51	0.0050	
2	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0.0	14.2	Cattle	0.67	3.1	0.7	0.0	0.0	23	0.1	0.06	0.0125	0.21	0.37	
Year	N	23	0	2.6	0	0	100	11	0.820	0.0	0	14.2	Dairy	2	0.4	0.1	0.0	0.0	23	0.0	0.36	0.0200	0.11	0.0050	
3	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0.0	1.6	Cattle	0.67	0.0	0.0	0.0	0.0	23	0.3	0.03	0.08	0.02	0.04	
Year	N	23	0	0.3	0	0	100	1	0.820	0.0	0	1.6	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.01	0.0125	0.01	0.0100	
4	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	SBA	1.000	NO	0.0	0.2	Cattle	0.65	0.0	0.0	0.0	0.0	23	0.0	0.04	0.0200	0.01	0.0050	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.2	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0000	
5	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WBA	1.000	NO	0.0	0.0	Cattle	0.66	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0000	0.00	0.0000	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0000	0.00	0.0000	
6	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	MCB	1.000	NO	0.0	0.0	Cattle	0.83	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0050	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0200	0.00	0.0050	
7	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0.0	0.0	Cattle	0.67	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0000	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0200	0.00	0.0050	
8	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0.0	0.0	Cattle	0.67	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0000	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0200	0.00	0.0050	
9	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	SBA	1.000	NO	0.0	0.0	Cattle	0.65	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0000	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0200	0.00	0.0050	
10	Vol/NH3	Cattle	NO	0.0	1.000	NO	100.00	WBA	1.000	NO	0.0	0.0	Cattle	0.66	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0125	0.00	0.0000	
Year	N	23	0	0.0	0.820	0.0	1.00	1.000	0.820	0.0	0	0.0	Dairy	2	0.0	0.0	0.0	0.0	23	0.0	0.00	0.0200	0.00	0.0050	

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.09 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.81 1.14

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 0.71  
 Total IPCC and non IPCC N2O 4.27  
 Total anthropogenic 4.27  
 Total including natural 5.08  
 Note 50  
 Note 51  
 Note 51  
 Note 51



N CHAIN STARTING WITH N FERTILIZER AND CONTINUING WITH LIQUID CATTLE MANURE TO PRODUCE CEREAL benefit 1/0 TO PRODUCE MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR CATTLE BEEF CATTLE BEEF

Year Fertilizer/manure # Store 1/0 Name 1/0 Store 1/0 Name 1/0 Crop # N crop #71/ #72 Food #8 Fuel/ other #9 Manure handling # Name Final N a-

Table with 10 columns: Year, Fertilizer/manure #, Store, Name, Crop, N crop, Food, Fuel/ other, Manure handling, Final N a-. Includes sub-tables for 'RATIO OF N2O-N TO N IN FIRST CROP' and 'TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED'.

N2O-N in food/beverage/fuel/other

Main data table with 10 columns: Year, N leach, N leach, N leach, N leach, N leach, N leach, N leach, N leach, N leach. Rows 1-10 showing N2O-N emissions for various years and crop types.

Year Area with crop, ha

Possible additional non IPCC N2O-N emissions N residues emissions, ratio of N2O-N to N: Increased soil N emissions, kg N2O-N/ha: Natural background emissions, kg N2O-N/ha: Total IPCC and non IPCC N2O Total IPCC and non IPCC N2O



N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH CATTLE DEEP LITTER TO PRODUCE

Year Fertilizer/manure # Store Amounts Field 1/0 Or-ganic 1/0 Nnorm propor tion, % Name # Crop use & leach Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #72 Food #8 Fuel/ other #9 Manure handling # Name Final N a- mounts N2O-N emission IPCC 1996 N2O-N emission IPCC 2006 Total Each Total

Total N	RATIO OF N2O-N TO N IN FIRST CROP										TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED									
Year N NH3	IPCC 1996					IPCC 2006					TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3					TOTAL N AMOUNTS IN KG AND % LEACHED				
1-10 N leach	0.1166	0.0584	0.1444	0.0732	0.0732	8.5	8.2	10.6	10.2	81.6	81.6	100.0	100.0	100.0	100.0	100.0	100.0			
TOTAL	0.1166	0.0584	0.1444	0.0732	0.0732	8.5	8.2	10.6	10.2	81.6	81.6	100.0	100.0	100.0	100.0	100.0	100.0			

N2O-N in food/beverage/fuel/other

Year N	1	0	100.0	100.0	0	100	59	0	0	97.8	22	30.0	7.7	0.0	0.0	0.0	23	22.3	1.77	3.50	1.21	1.75	
1	Vol/NH3	N	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	0.693	0.0	0.83	0.0	0.0	0.0	0.0	Cattle	1.3	0.04	0.125	0.04	0.1000
N leach	1.022	1.000	1.000	1.000	ORG	1.00	1.000	0.693	0.0	67.8	Beef	2	10.1	10.1	10.1	10.1	10.1	Deep	0.0	1.70	0.0200	0.51	0.0050
Year N	23	0	24.3	24.3	0	100	11	0	0	18.2	22	3.3	0.7	0.0	0.0	0.0	23	2.6	0.30	0.74	0.22	0.39	
2	Vol/NH3	Cattle	NO	0.0	6.1	NON	100.00	WWH	1.000	NO	0.820	0.0	0.67	0.0	0.0	0.0	0.0	Cattle	0.2	0.06	0.125	0.06	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	14.9	Beef	2	1.9	1.9	1.9	1.9	1.9	Deep	0.0	0.37	0.0200	0.11	0.0050
Year N	23	0	2.8	2.8	0	100	11	0	0	2.1	22	0.4	0.1	0.0	0.0	0.0	23	0.3	0.03	0.09	0.03	0.05	
3	Vol/NH3	Cattle	NO	0.0	0.7	NON	100.00	WWH	1.000	NO	0.820	0.0	0.67	0.0	0.0	0.0	0.0	Cattle	0.0	0.01	0.125	0.01	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	1.7	Beef	2	0.2	0.2	0.2	0.2	0.2	Deep	0.0	0.04	0.0200	0.01	0.0050
Year N	23	0	0.3	0.3	0	100	1	0	0	0.2	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.01	0.00	0.01	
4	Vol/NH3	Cattle	NO	0.0	0.1	NON	100.00	SBA	1.000	NO	0.820	0.0	0.65	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.2	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.01	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	10	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
5	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	WBA	1.000	NO	0.820	0.0	0.66	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	59	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
6	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	MCB	1.000	NO	0.820	0.0	0.83	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	11	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
7	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	WWH	1.000	NO	0.820	0.0	0.67	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	11	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
8	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	WWH	1.000	NO	0.820	0.0	0.67	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	1	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
9	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	SBA	1.000	NO	0.820	0.0	0.65	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050
Year N	23	0	0.0	0.0	0.0	100	10	0	0	0.0	22	0.0	0.0	0.0	0.0	0.0	23	0.0	0.00	0.00	0.00	0.00	
10	Vol/NH3	Cattle	NO	0.0	0.0	NON	100.00	WBA	1.000	NO	0.820	0.0	0.66	0.0	0.0	0.0	0.0	Cattle	0.0	0.00	0.125	0.00	0.0100
N leach	0.600	1.159	1.159	1.159	ORG	1.00	1.000	0.820	0.0	0.0	Beef	2	0.0	0.0	0.0	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.09 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.82 1.14

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 3.01

Total IPCC and non IPCC N2O 4.33  
 Total anthropogenic 4.33  
 Total including natural 5.15

Kind of source  
 Current crops 2.20  
 Total anthropogenic 2.20  
 Total including natural 3.01

Total 2.20  
 Note 45  
 Note 45  
 Note 45

Note 44  
 Note 44  
 Note 44

Note 43  
 Note 43  
 Note 43





N CHAIN STARTING WITH N FERTILIZER TO PRODUCE CEREAL TO PRODUCE MAIZE COBS FOR BIOETHANOL AND PIG PORK  
 AND CONTINUING WITH LIQUID PIG MANURE TO PRODUCE WINTER WHEAT FOR

Year	Fertilizer/manure #	Store 1/0	Amounts Store	Field 1/0	Or-ganic 1/0	Nnorm propor-tion, %	Crop #	Use Name	Fodder: Uses #21-61	N crop #71/	Food #72	Fuel/other #9	Manure handling #	Final N a-mounts	N2O-N emission IPCC 1996	N2O-N emission IPCC 2006	Total
Total N																	
Year 1-10	N NH3	100.0	0	100.0	2.2 NON	100.0	MCB	97.8 Pig	30.0	0.0	12.5	0.0	0.0	17.5	1.36	3.55	1.33
	N leach	1.022	1.000	0.0	0.693	0.0		67.8 Pig	0.83					2.4	0.05	0.0125	1.18
	N NH3	15.0	0	15.0	15.0	0	11.3	3.4	3.4	0.0	1.4	0.0	0.0	2.0	0.16	0.39	0.51
	N leach	1.000	1.000	0.0	1.000	0.0		7.9 Pig	0.67					0.3	0.04	0.0125	0.14
	N NH3	1.7	0	1.7	0.4	0.0	1.3	0.4	0.4	0.0	0.2	0.0	0.0	0.2	0.02	0.04	0.06
	N leach	1.000	1.000	0.0	1.000	0.0		0.9 Pig	0.67					0.0	0.00	0.0125	0.06
	N NH3	0.2	0	0.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.01	0.01
	N leach	1.000	1.000	0.0	0.700	0.0		0.9 Pig	0.67					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.1	0.1	0.65					0.0	0.00	0.0125	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.1 Pig	0.65					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.1 Pig	0.66					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.0 Pig	0.66					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.0 Pig	0.83					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.0 Pig	0.67					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.0 Pig	0.67					0.0	0.00	0.0125	0.00
	N NH3	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00
	N leach	1.000	1.000	0.0	0.700	0.0		0.0 Pig	0.66					0.0	0.00	0.0125	0.00

N2O-N in food/beverage/fuel/other

Year	Vol/NH3	N	NO	100.0	0	100	59	0	0	0	0	0	0	0	0	0	0	0
Year 1	Vol/NH3	N	NO	100.0	0	100	59	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.022	1.000	0.0	0.693	0.0												
Year 2	Vol/NH3	Pig	NO	15.0	0	100	11	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	1.000	0.0												
Year 3	Vol/NH3	Pig	NO	1.7	0	100	11	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 4	Vol/NH3	Pig	NO	0.2	0	100	1	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 5	Vol/NH3	Pig	NO	0.0	0	100	10	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 6	Vol/NH3	Pig	NO	0.0	0	100	59	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 7	Vol/NH3	Pig	NO	0.0	0	100	11	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 8	Vol/NH3	Pig	NO	0.0	0	100	11	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 9	Vol/NH3	Pig	NO	0.0	0	100	1	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												
Year 10	Vol/NH3	Pig	NO	0.0	0	100	10	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.000	1.000	0.0	0.700	0.0												

Year	Area with crop, ha	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total	Total/year 1
Year	Area with crop, ha	0.71	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	1.15
Possible additional non IPCC N2O-N emissions	Value	0.0000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	1.15
N residues emissions, ratio of N2O-N to N:	Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Increased soil N emissions, kg N2O-N/ha:	Value	1.00	0.71	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.82	1.15
Natural background emissions, kg N2O-N/ha:	Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total IPCC and non IPCC N2O	Value	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55	3.55
Total including natural	Value	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37	4.37



N CHAIN STARTING WITH N FERTILIZER TO PRODUCE CEREAL TO PRODUCE MAIZE COBS FOR BIOETHANOL AND PIG PORK  
 AND CONTINUING WITH PIG DEEP LITTER TO PRODUCE TO PRODUCE WINTER WHEAT FOR PIG PORK

Year Fertilizer/manure Or-ganic Nnorm Crop Straw Cereal Crop Food/Fuel/ Manure Final N2O-N emission  
 # Store Amounts 1/0 Field 1/0 1/0 use & # #71/ be v other # # Name handling N a-  
 Name 1/0 Store 1/0 1/0 1/0 leach 1/0 benefit 1/0 Name Fed Food #72 #8 #9 # Name mounts Each Total

Total N	RATIO OF N2O-N TO N IN FIRST CROP TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED												
Year N NH3	IPCC 1996 IPCC 2006												
1-10 N leach	0.1124	0.0581	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3										
TOTAL	0.1280	0.0668	TOTAL N AMOUNTS IN KG AND % LEACHED										
	TOTAL N AMOUNTS IN KG AND %												

Year	N	Vol/NH3	N	NO	100.0	100.0	0	100	59	0	0	0	97.8	32	30.0	12.5	0.0	0.0	0.0	0.0	17.5	1.61	3.37	1.17	0.1444	Note 46			
1	Vol/NH3	N	NO	2.2	NON	100.00	MCB	1.000	NO	1.000	NO	0	0	0	0.83	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.74	Note 47	
	N leach			1.022	1.000	1.000	1.000	0.693	0.0	0.693	0.0	0	0	0	3	3	10.1	Deep	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.07	0.0100	Note 48
Year	2	Vol/NH3	Pig	NO	14.8	0	100	11	0	0	0	0	11.1	32	2.9	1.2	0.0	0.0	0.0	0.0	1.7	0.18	0.42	0.13	0.23	Note 47			
	N leach	Deep	0.867	1.127	3.7	NON	100.00	WWH	1.000	NO	1.000	0	0	0	0.67	0.67	0.0	0.0	0.0	0.0	0.4	0.04	0.125	0.04	0.0100	Note 48			
Year	3	Vol/NH3	Pig	NO	1.4	0	100	11	0	0	0	0	1.1	32	0.3	0.1	0.0	0.0	0.0	0.0	0.2	0.02	0.04	0.01	0.02	Note 47			
	N leach	Deep	0.867	1.127	0.4	NON	100.00	WWH	1.000	NO	1.000	0	0	0	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100	Note 48			
Year	4	Vol/NH3	Pig	NO	0.1	0	100	1	0	0	0	0	0.8	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.01	0.0050	Note 49		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	SBA	1.000	NO	1.000	0	0	0	0.65	0.65	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.0050	Note 48		
Year	5	Vol/NH3	Pig	NO	0.0	0	100	10	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	WBA	1.000	NO	1.000	0	0	0	0.66	0.66	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0100	Note 48
Year	6	Vol/NH3	Pig	NO	0.0	0	100	59	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	MCB	1.000	NO	1.000	0	0	0	0.83	0.83	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0100	Note 48
Year	7	Vol/NH3	Pig	NO	0.0	0	100	11	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	WWH	1.000	NO	1.000	0	0	0	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0100	Note 48
Year	8	Vol/NH3	Pig	NO	0.0	0	100	11	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	WWH	1.000	NO	1.000	0	0	0	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0050	Note 49
Year	9	Vol/NH3	Pig	NO	0.0	0	100	1	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	SBA	1.000	NO	1.000	0	0	0	0.65	0.65	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0100	Note 48
Year	10	Vol/NH3	Pig	NO	0.0	0	100	10	0	0	0	0	0.0	32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	Note 47		
	N leach	Deep	0.867	1.127	0.0	NON	100.00	WBA	1.000	NO	1.000	0	0	0	0.66	0.66	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.0100	Note 48
Year		N leach	Deep	0.867	1.127	0.0	100	1000	0.740	0.740	0.0	0.0	0.0	0.0	3	3	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.0050	Note 49	

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1  
 Area with crop, ha 0.71 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.80 1.12 Note 50

Possible additional non IPCC N2O-N emissions Value  
 N residues emissions, ratio of N2O-N to N: 0.0000  
 Increased soil N emissions, kg N2O-N/ha: 0.00  
 Natural background emissions, kg N2O-N/ha: 1.00  
 Total IPCC and non IPCC N2O 3.84  
 Total anthropogenic 3.84  
 Total including natural 4.64  
 Note 51  
 Note 51  
 Note 51  
 Note 51



N CHAIN STARTING WITH N FERTILIZER AND CONTINUING WITH LIQUID POULTRY MANURE TO PRODUCE Cereal benefit 1/0 TO PRODUCE Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #72 Food #73 Fuel/ other #9 MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR POULTRY MEAT

Year	Fertilizer/manure #	Store	Amounts	Field	1/0	Or-ganic	Nnorm	Crop	use & leach	1/0	Use #	Fodder: Uses #21-61	Food #72	bev #73	Fuel/ other #9	Manure handling #	Final N a-	N2O-N emission IPCC 1996	Total	N2O-N emission IPCC 2006	Total	
RATIO OF N2O-N TO N IN FIRST CROP ACCORDING TO FIRST YEAR TOTAL																						
Total N	1	0	100.0	100.0	0	100	59	0	0	0	97.8	42	30.0	15.3	0.0	0.0	16.7	16.7	1.51	3.48	1.30	1.94
Year 1-10	N NH3	N leach	1.022	1.000	2.2	NON	100.00	MCB	1.000	NO	67.8	Poultry	0.83	0.83	0.0	0.0	7.4	7.4	0.07	0.07	0.07	0.07
Year 1-10	N leach	0	13.2	13.2	0	100	11	0	0	0	67.8	Meat	4	4	10.1	Liquid	7.4	7.4	1.90	1.90	0.57	0.57
Year 1-10	N NH3	Poultry NO	0.0	0.0	3.3	NON	100.00	WWH	1.000	NO	7.3	Poultry	0.67	0.67	0.0	0.0	0.1	0.1	0.03	0.03	0.03	0.03
Year 1-10	N leach	Liquid	0.867	1.000	1.1	0	100	11	0	0	7.3	Meat	4	4	1.0	Liquid	0.1	0.1	0.18	0.18	0.06	0.06
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.3	NON	100.00	WWH	1.000	NO	0.6	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.02	0.02	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.1	0	100	1	0	0	0.6	Meat	4	4	0.1	Liquid	0.0	0.0	0.02	0.02	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	SBA	1.000	NO	0.1	Poultry	0.65	0.65	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	10	0	0	0.1	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.66	0.66	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	59	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	MCB	1.000	NO	0.0	Poultry	0.83	0.83	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	11	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WWH	1.000	NO	0.0	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	11	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	10	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	SBA	1.000	NO	0.0	Poultry	0.65	0.65	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 1-10	N leach	Liquid	0.867	1.000	0.0	0	100	10	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.00	0.00	0.00

N2O-N in food/beverage/fuel/other

Year	Vol/NH3	N	1	0	100.0	100.0	0	100	59	0	0	0	0	0	0.0	0.0	14.7	14.7	1.36	3.09	1.17	1.72
Year 1	Vol/NH3	N leach	1.022	1.000	2.2	NON	100.00	MCB	1.000	NO	67.8	Poultry	0.83	0.83	0.0	0.0	1.5	1.5	0.04	0.125	0.04	0.100
Year 2	Vol/NH3	Poultry NO	0.0	0.0	3.3	NON	100.00	WWH	1.000	NO	7.3	Poultry	0.67	0.67	0.0	0.0	0.1	0.1	0.03	0.125	0.03	0.100
Year 3	Vol/NH3	Poultry NO	0.0	0.0	1.1	0	100	11	0	0	7.3	Meat	4	4	1.0	Liquid	0.0	0.0	0.18	0.010	0.06	0.0050
Year 4	Vol/NH3	Poultry NO	0.0	0.0	0.3	NON	100.00	WWH	1.000	NO	0.6	Poultry	0.67	0.67	0.0	0.0	0.1	0.1	0.01	0.03	0.01	0.02
Year 5	Vol/NH3	Poultry NO	0.0	0.0	0.1	0	100	1	0	0	0.6	Meat	4	4	0.0	0.0	0.0	0.0	0.02	0.010	0.00	0.0100
Year 6	Vol/NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	SBA	1.000	NO	0.1	Poultry	0.65	0.65	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0050
Year 7	Vol/NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.66	0.66	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 8	Vol/NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	MCB	1.000	NO	0.0	Poultry	0.83	0.83	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0050
Year 9	Vol/NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WWH	1.000	NO	0.0	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0050
Year 10	Vol/NH3	Poultry NO	0.0	0.0	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.66	0.66	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0050
Year 10	N leach	Liquid	0.867	1.000	0.0	0	100	10	0	0	0.0	Meat	4	4	0.0	Liquid	0.0	0.0	0.00	0.0010	0.00	0.0050

Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha

Area with crop, ha	0.71	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.79	1.11	0.1160	Note 46
Possible additional non IPCC N2O-N emissions	Value																	
N residues emissions, ratio of N2O-N to N:	0.0000																	
Increased soil N emissions, kg N2O-N/ha:	0.00																	
Natural background emissions, kg N2O-N/ha:	1.00																	
Total IPCC and non IPCC N2O	3.48																	
Note 51	1.94 Note 51																	
Note 43	2.74 Note 51																	



N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH POULTRY DEEP LITTER TO PRODUCE

Year Fertilizer/manure # Store Amounts Field 1/0 Or-ganic 1/0 Nnorm propor tion, % Name # Crop use & leach Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #72 Food #8 Fuel/ other #9 Manure handling # Final N a- mounts Total N2O-N emission IPCC 1996 IPCC 2006

Total N	RATIO OF N2O-N TO N IN FIRST CROP												15.9	1.63	3.57	1.23	1.89	Note 45
Year N NH3	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED												10.7	0.11	0.11	0.11	0.11	Note 45
1-10 N leach	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3												73.5	1.84	1.84	0.55	0.55	Note 45
	TOTAL N AMOUNTS IN KG AND % LEACHED												73.4					
	TOTAL N AMOUNTS IN KG AND %												100.1					
	TOTAL N AMOUNTS IN KG AND %												100.0					

N2O-N in food/beverage/fuel/other

Year N	1	0	100.0	100.0	0	100	59	0	0	97.8	42	30.0	15.3	0.0	0.0	0.0	43	14.7	1.53	3.30	1.15	1.74	Note 47
1	Vol/NH3	N	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	0.693	0.0	67.8	Poultry	0.83	0.0	Poultry	5.9	0.08	0.0125	0.08	0.0100	Note 48
	N leach			1.022	1.000	ORG	1.00	1.000	0.693	0.0	0.0	10.1	Deep	4	0.0	10.1	Deep	0.0	1.70	0.0200	0.51	0.0050	Note 49
Year N	2	43	0	8.9	0	100	11	0	0	6.7	42	1.2	0.6	0.0	0.0	0.0	43	0.6	0.10	0.26	0.08	0.14	Note 47
2	Vol/NH3	Poultry	NO	0.0	2.2	NON	100.00	WWH	1.000	NO	0.820	0.0	5.5	Poultry	0.67	0.0	Poultry	0.2	0.02	0.0125	0.02	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.7	Deep	4	0.0	0.7	Deep	0.0	0.14	0.0200	0.04	0.0050	Note 49
Year N	3	43	0	0.4	0	100	11	0	0	0.3	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.01	0.00	0.01	Note 47
3	Vol/NH3	Poultry	NO	0.0	0.1	NON	100.00	WWH	1.000	NO	0.820	0.0	0.2	Poultry	0.67	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.2	Deep	4	0.0	0.2	Deep	0.0	0.01	0.0200	0.00	0.0050	Note 49
Year N	4	43	0	0.0	0.0	100	1	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
4	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	SBA	1.000	NO	0.820	0.0	0.0	Poultry	0.65	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	5	43	0	0.0	0.0	100	10	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
5	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	WBA	1.000	NO	0.820	0.0	0.0	Poultry	0.66	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	6	43	0	0.0	0.0	100	59	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
6	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	MCB	1.000	NO	0.820	0.0	0.0	Poultry	0.83	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	7	43	0	0.0	0.0	100	11	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
7	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	WWH	1.000	NO	0.820	0.0	0.0	Poultry	0.67	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	8	43	0	0.0	0.0	100	11	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
8	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	WWH	1.000	NO	0.820	0.0	0.0	Poultry	0.67	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	9	43	0	0.0	0.0	100	1	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
9	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	SBA	1.000	NO	0.820	0.0	0.0	Poultry	0.65	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49
Year N	10	43	0	0.0	0.0	100	10	0	0	0.0	42	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.00	0.00	0.00	Note 47
10	Vol/NH3	Poultry	NO	0.0	0.0	NON	100.00	WBA	1.000	NO	0.820	0.0	0.0	Poultry	0.66	0.0	Poultry	0.0	0.00	0.0125	0.00	0.0100	Note 48
	N leach	Deep		1.013	0.600	ORG	1.00	1.000	0.820	0.0	0.0	0.0	Deep	4	0.0	0.0	Deep	0.0	0.00	0.0200	0.00	0.0050	Note 49

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.75 1.05 Note 50

Possible additional non IPCC N2O-N emissions Value 0.0000 Kind of source Total IPCC and non IPCC N2O Note 51  
 N residues emissions, ratio of N2O-N to N: 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Current crops 1.89 Note 51  
 Increased soil N emissions, kg N2O-N/ha: 1.00 0.71 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.75 Total anthropogenic 3.57 1.89 Note 51  
 Natural background emissions, kg N2O-N/ha: 1.00 0.71 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.75 Total including natural 4.32 2.64 Note 51



N CHAIN STARTING WITH N FERTILIZER TO PRODUCE MAIZE COBS FOR BIOETHANOL AND POULTRY MEAT  
 AND CONTINUING WITH MANURE FROM SCRAPING POULTRY TO PRODUCE WINTER WHEAT FOR POULTRY MEAT

Year Fertilizer/manure # Store Amounts Field 1/0 Or-ganic 1/0 Nnorm propor # Crop use & leach Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #72 Food #73 Fuel/ other #9 Manure handling # Final N a- mounts Total N2O-N emission IPCC 1996 Each Total N2O-N emission IPCC 2006 Each Total

Total N	RATIO OF N2O-N TO N IN FIRST CROP										TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED											
Year N NH3	1	0	100.0	100.0	0	100	59	0	0	97.8	42	30.0	15.3	0.0	0.0	0.0	16.4	16.4	1.87	3.91	1.58	2.22
1-10 N leach	1.022	1.000	0.0	2.2	NON	100.00	MCB	1.000	NO	67.8	Poultry	0.83	0.83	0.0	0.0	0.0	3.3	3.3	0.03	0.03	0.03	0.03
TOTAL	0.1120	0.1302	0.0643	0.0740	0.1120	0.1302	0.0643	0.0740	0.1120	0.1302	0.0643	0.0740	0.1120	0.1302	0.0643	0.0740	80.3	80.3	2.01	2.01	0.60	0.60
										TOTAL N AMOUNTS IN KG AND %												

N2O-N in food/beverage/fuel/other

Year N	1	0	100.0	100.0	0	100	59	0	0	97.8	42	30.0	15.3	0.0	0.0	0.0	14.7	14.7	1.64	3.36	1.40	1.93	
1	Vol/NH3	N	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	67.8	Poultry	0.83	0.83	0.0	0.0	0.0	44	44	0.02	0.125	0.02	0.100
N leach	1.022	1.000	0.0	2.2	NON	100.00	MCB	1.000	NO	67.8	Poultry	0.83	0.83	0.0	0.0	0.0	10.1	10.1	0.51	0.0200	0.02	0.0200	
Year 2	Vol/NH3	Poultry	NO	0.0	14.7	0	100	11	0	13.7	42	2.0	1.0	0.0	0.0	0.0	1.0	44	44	0.21	0.51	0.17	0.27
N leach	Scrap	0.484	1.000	1.0	NON	100.00	WWH	1.000	NO	11.7	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.0125	0.01	0.0100
Year 3	Vol/NH3	Poultry	NO	0.0	1.0	0	100	11	0	0.9	42	0.1	0.1	0.0	0.0	0.0	0.1	44	44	0.01	0.03	0.01	0.02
N leach	Scrap	0.484	1.000	0.1	NON	100.00	WWH	1.000	NO	0.8	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 4	Vol/NH3	Poultry	NO	0.0	0.1	0	100	1	0	0.1	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	SBA	1.000	NO	0.1	Poultry	0.65	0.65	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
Year 5	Vol/NH3	Poultry	NO	0.0	0.0	0	100	10	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.66	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 6	Vol/NH3	Poultry	NO	0.0	0.0	0	100	59	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	MCB	1.000	NO	0.0	Poultry	0.83	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0200
Year 7	Vol/NH3	Poultry	NO	0.0	0.0	0	100	11	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	WWH	1.000	NO	0.0	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 8	Vol/NH3	Poultry	NO	0.0	0.0	0	100	11	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	WWH	1.000	NO	0.0	Poultry	0.67	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 9	Vol/NH3	Poultry	NO	0.0	0.0	0	100	1	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	SBA	1.000	NO	0.0	Poultry	0.65	0.65	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year 10	Vol/NH3	Poultry	NO	0.0	0.0	0	100	10	0	0.0	42	0.0	0.0	0.0	0.0	0.0	0.0	44	44	0.00	0.00	0.00	0.00
N leach	Scrap	0.484	1.000	0.0	NON	100.00	WBA	1.000	NO	0.0	Poultry	0.66	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100

Year Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.04 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.76 1.07

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha:

Total IPCC and non IPCC N2O 3.91  
 Total anthropogenic 3.91  
 Total including natural 4.67

Note 43 Note 43 Note 44 Note 44 Note 44 Note 45 Note 45 Note 46 Note 47 Note 48 Note 49 Note 49 Note 47 Note 48 Note 49 Note 47 Note 48 Note 49 Note 47 Note 48 Note 49 Note 47 Note 48 Note 49 Note 50 Note 51 Note 51 Note 51 Note 51

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH LIQUID POULTRY MANURE TO PRODUCE TO PRODUCE

MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR  
 POULTRY EGGS  
 POULTRY EGGS

Year	Fertilizer/manure #	Store Name	1/0	Field	Or-ganic 1/0	Nnorm propor 1/0	Crop #	Straw used 1/0	Feed use & leach 1/0	N crop #71-61	Fuel/other #9	Manure handling #	Final N a-mounts	N2O-N emission IPCC 1996	N2O-N emission IPCC 2006	Total	Note
Total	N	N NH3	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED														
			TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3														
Year 1-10	N	N leach	TOTAL N AMOUNTS IN KG AND % LEACHED														
			TOTAL N AMOUNTS IN KG AND %														

Year	N	1	0	100.0	100.0	0	100	59	0	0	97.8	43	30.0	7.2	0.0	0.0	0.0	41	22.8	1.62	3.75	1.42	2.14	Note			
Year 1	N	VoI/NH3	N	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	1.000	NO	0.83	0.0	0.0	0.0	Poultry	2.3	0.04	0.125	0.04	1.21	1.76	Note 47		
																										N	leach
Year 2	N	VoI/NH3	N	Poultry	NO	0.0	20.5	0	100	11	1.000	NO	1.000	NO	1.000	NO	0.67	0.0	0.21	0.55	0.19	0.33	Note 47				
																								N	leach	0.867	1.000
Year 3	N	VoI/NH3	N	Poultry	NO	0.0	0.7	NON	100.00	WVH	1.000	NO	1.000	NO	1.000	NO	0.67	0.0	0.03	0.07	0.02	0.04	Note 47				
																								N	leach	0.867	1.000
Year 4	N	VoI/NH3	N	Poultry	NO	0.4	0.4	0	100	1	1.000	NO	1.000	NO	1.000	NO	0.65	0.1	0.0	0.01	0.00	0.01	0.00				
																								N	leach	0.867	1.000
Year 5	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	10	1.000	NO	1.000	NO	1.000	NO	0.66	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000
Year 6	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	59	1.000	NO	1.000	NO	1.000	NO	0.83	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000
Year 7	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	11	1.000	NO	1.000	NO	1.000	NO	0.67	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000
Year 8	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	11	1.000	NO	1.000	NO	1.000	NO	0.67	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000
Year 9	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	1	1.000	NO	1.000	NO	1.000	NO	0.65	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000
Year 10	N	VoI/NH3	N	Poultry	NO	0.0	0.0	0.0	100	10	1.000	NO	1.000	NO	1.000	NO	0.66	0.0	0.0	0.00	0.00	0.00	0.00				
																								N	leach	0.867	1.000

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total	Total/year 1	Note
Area with crop, ha		0.71	0.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.84	1.18	Note 50
Possible additional non IPCC N2O-N emissions	Value												
N residues emissions, ratio of N2O-N to N:	0.0000												
Increased soil N emissions, kg N2O-N/ha:	0.00												
Natural background emissions, kg N2O-N/ha:	1.00												
Total IPCC and non IPCC N2O	3.75												
Total anthropogenic	3.75												
Total including natural	4.59												
Kind of source	0.00 Current crops												
Total	2.14 Note 51												
Total including natural	2.98 Note 51												



N CHAIN STARTING WITH N FERTILIZER AND CONTINUING WITH POULTRY DEEP LITTER TO PRODUCE Cereal benefit 1/0 TO PRODUCE Straw used 1/0 Crop use & leach TO PRODUCE MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR N crop Food/ #71/ bev #72 Food #73 Fuel/ other #9 Poultry EGGS POULTRY EGGS

Year	Fertilizer/manure #	Store	Amounts	Field	1/0	Or-ganic	Nnorm	Crop	Use	Fooder:	N crop	Fuel/	Manure	Final	N2O-N emission
Year	Name	1/0	Store	Field	1/0	1/0	propor	use &	#	Uses #21-61	#71/	#8	# Name	N a-	IPCC 1996
Year	Name	1/0	Store	Field	1/0	1/0	tion, %	leach	Name	Fed	Food	#9	# Name	mounts	Total

Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	7.7	7.7
Year N NH3	IPCC 1996	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	15.6	15.6
1-10 N leach	0.1144	TOTAL N AMOUNTS IN KG AND % LEACHED	76.9	76.7
TOTAL	0.1290	TOTAL N AMOUNTS IN KG AND %	100.2	100.0

Year	N	1	0	100.0	100.0	0	100	59	0	0	0	7.2	0.0	0.0	0.0	0.0	43	22.8	1.79	3.87	1.30	2.04
Year	N	1	0	100.0	100.0	0	100	59	0	0	0	7.2	0.0	0.0	0.0	0.0	43	22.8	1.79	3.87	1.30	2.04
Year	N	1	0	100.0	100.0	0	100	59	0	0	0	7.2	0.0	0.0	0.0	0.0	43	22.8	1.79	3.87	1.30	2.04
Year	N	1	0	100.0	100.0	0	100	59	0	0	0	7.2	0.0	0.0	0.0	0.0	43	22.8	1.79	3.87	1.30	2.04
Year	N	1	0	100.0	100.0	0	100	59	0	0	0	7.2	0.0	0.0	0.0	0.0	43	22.8	1.79	3.87	1.30	2.04
1	Vol/NH3	N	NO	0.0	1.000	NO	100.00	MCB	1.000	NO	0	0.83	0.0	0.0	0.0	0.0	Poultry	9.1	1.62	3.43	0.16	1.79
	N leach	1.022	1.000	ORG	0.693	0.0	1.00	1.000	0.693	0.0	4	10.1	Deep	10.1	0.0	0.0	10.1	9.1	0.11	0.125	0.16	1.79
Year	N	43	0	13.8	0	0	100	11	0	0	4	0.5	0.0	0.0	0.0	0.0	43	1.4	1.70	0.200	0.51	0.0050
2	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0	0.67	0.0	0.0	0.0	0.0	Poultry	0.6	0.04	0.125	0.04	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	1.1	Deep	1.1	0.0	0.0	1.1	0.6	0.21	0.200	0.06	0.0050
Year	N	43	0	0.9	0	0	100	11	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.1	0.01	0.03	0.01	0.01
3	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0	0.67	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.1	Deep	0.1	0.0	0.0	0.1	0.0	0.01	0.200	0.00	0.0050
Year	N	43	0	0.1	0	0	100	1	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.01
4	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	SBA	1.000	NO	0	0.65	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.01	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	10	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
5	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WBA	1.000	NO	0	0.66	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	59	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
6	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	MCB	1.000	NO	0	0.83	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	11	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
7	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0	0.67	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	11	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
8	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WWH	1.000	NO	0	0.67	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	1	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
9	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	SBA	1.000	NO	0	0.65	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050
Year	N	43	0	0.0	0.0	0	100	10	0	0	4	0.0	0.0	0.0	0.0	0.0	43	0.0	0.00	0.200	0.00	0.00
10	Vol/NH3	Poultry	NO	0.0	1.000	NO	100.00	WBA	1.000	NO	0	0.66	0.0	0.0	0.0	0.0	Poultry	0.0	0.00	0.125	0.00	0.1000
	N leach	0.600	1.013	ORG	0.820	0.0	1.00	1.000	0.820	0.0	4	0.0	Deep	0.0	0.0	0.0	0.0	0.0	0.00	0.200	0.00	0.0050

Year 1 Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10 Total Total/year 1

Area with crop, ha 0.71 0.05 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.77 1.08 Note 50

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 0.71

Total IPCC and non IPCC N2O 3.87  
 Total anthropogenic 3.87  
 Total including natural 4.64  
 Note 51 2.04 Note 51 2.04 Note 51 2.80 Note 51

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE MAIZE COBS FOR BIOETHANOL AND POULTRY EGGS  
 AND CONTINUING WITH MANURE FROM SCRAPING POULTRY TO PRODUCE WINTER WHEAT FOR POULTRY EGGS

Year Fertilizer/manure # Store Amounts Field 1/0 Or-ganic 1/0 Nnorm propor # Crop use & leach Straw used 1/0 Cereal benefit 1/0 Use # Name Fed Fodder: Uses #21-61 Food #72 N crop Food/ bev #71 other #9 Fuel/ #8 Fuel/ other #9 Manure Final handling N a- # Name mounts N2O-N emission IPCC 1996 Each Total N2O-N emission IPCC 2006 Each Total

Total N	RATIO OF N2O-N TO N IN FIRST CROP		TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED													
Year	N NH3	NO	IPCC 1996	IPCC 2006	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total	Total/year 1
1-10	N leach		0.1174	0.0697												
	TOTAL		0.1474	0.0859												

N2O-N in food/beverage/fuel/other

Year	N	Vol/NH3	N	NO	100.0	0	100	59	0	0	97.8	43	30.0	7.2	0.0	0.0	0.0	22.8	2.18	4.42	1.88	2.58			
1	N leach	1.022	1.000	1.000	NO	2.2	NON	100.00	MCB	1.000	NO	1.000	NO	0.83	67.8	Poultry	0.83	0.0	0.0	0.0	0.0	0.0	1.56	2.09	
Year	N	44	0	22.8	22.8	0	100	11	0	0	67.8	Eggs	4	3.1	0.7	0.0	0.0	0.0	10.1	Scrap	0.0	0.0	0.02	0.0100	
2	N leach	Scrap	0.484	1.000	1.6	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	18.1	Poultry	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	0.0200
Year	N	44	0	2.3	2.3	0	100	11	0	0	18.1	Eggs	4	0.3	0.1	0.0	0.0	0.0	2.2	Scrap	0.0	0.0	0.02	0.0100	
3	N leach	Scrap	0.484	1.000	0.2	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	1.9	Poultry	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.29
Year	N	44	0	0.2	0.2	0	100	1	0	0	1.9	Eggs	4	0.2	0.0	0.0	0.0	0.0	0.2	Scrap	0.0	0.0	0.02	0.0100	
4	N leach	Scrap	0.484	1.000	0.0	NON	100.00	SBA	1.000	NO	1.000	NO	0.65	0.2	Poultry	0.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.0100
Year	N	44	0	0.0	0.0	0	100	10	0	0	0.2	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.05	0.0200	
5	N leach	Scrap	0.484	1.000	0.0	NON	100.00	WBA	1.000	NO	1.000	NO	0.66	0.0	Poultry	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	59	0	0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.01	0.0200	
6	N leach	Scrap	0.484	1.000	0.0	NON	100.00	MCB	1.000	NO	1.000	NO	0.83	0.0	Poultry	0.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	11	0	0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.00	0.0100	
7	N leach	Scrap	0.484	1.000	0.0	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	Poultry	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	11	0	0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.00	0.0200	
8	N leach	Scrap	0.484	1.000	0.0	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	Poultry	0.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	10	0	0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.00	0.0100	
9	N leach	Scrap	0.484	1.000	0.0	NON	100.00	SBA	1.000	NO	1.000	NO	0.65	0.0	Poultry	0.65	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	10	0	0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.00	0.0200	
10	N leach	Scrap	0.484	1.000	0.0	NON	100.00	WBA	1.000	NO	1.000	NO	0.66	0.0	Poultry	0.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
Year	N	44	0	0.0	0.0	0	100	1000	0.855	0.0	0.0	Eggs	4	0.0	0.0	0.0	0.0	0.0	0.0	Scrap	0.0	0.0	0.00	0.0200	

Year Area with crop, ha Possible additional non IPCC N2O-N emissions N residues emissions, ratio of N2O-N to N: Increased soil N emissions, kg N2O-N/ha: Natural background emissions, kg N2O-N/ha: Total IPCC and non IPCC N2O 4.42 2.58 Note 51 4.42 2.58 Note 51 5.21 3.37 Note 51

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH SHEEP DEEP LITTER TO PRODUCE

Year Fertilizer/manure # Store Amounts Field Name 1/0 Or-ganic 1/0 Nnorm propor tion, % Name # Crop use & leach Straw used 1/0 Cereal benefit 1/0 N crop Food/ #71/ bev #8 Fuel/ other #9 Manure Final handling N a- # Name mounts Each Total N2O-N emission IPCC 1996 N2O-N emission IPCC 2006 Total Each Total Note 43 Note 43 Note 44 Note 44 Note 44

Total N	RATIO OF N2O-N TO N IN FIRST CROP													
Year N NH3	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED													
1-10 N leach	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3													
	TOTAL N AMOUNTS IN KG AND % LEACHED													
	TOTAL N AMOUNTS IN KG AND %													

Year	N	1	0	100.0	100.0	0	100	59	0	0	0	97.8	51	30.0	4.3	0.0	0.0	0.0	25.7	4.66	1.21	1.57	2.28	4.66	2.33	1.57	2.33			
Year 1	Vol/NH3 N	1	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	0	0	0	0	0	0	0	0	0.0	0.0	0.06	0.07	0.06	1.79	3.54	1.21	1.78	0.0100		
Year 2	N leach	53	0	25.4	0	100	11	1.000	0.693	0	0	67.8	Sheep	0.83	5	10.1	Deep	0.0	0.0	0.0	0.51	0.0200	0.0	1.70	0.0200	0.51	0.0050	0.0050		
Year 3	Vol/NH3 Sheep NO	53	0	25.4	0	100	11	1.000	0.820	0	0	25.4	Milk/multi	5	4.6	0.0	0.0	0.0	3.9	0.42	0.30	0.94	0.0	0.42	0.30	0.47	0.0100	0.0100		
Year 4	N leach	53	0	25.4	0	100	11	1.000	0.820	0	0	20.8	Sheep	0.67	5	2.6	Deep	0.0	0.0	0.6	0.01	0.16	0.69	0.01	0.16	0.01	0.0100	0.0100		
Year 5	Vol/NH3 Sheep NO	53	0	3.9	0	100	11	1.000	0.820	0	0	3.9	Milk/multi	5	0.7	0.0	0.0	0.0	0.6	0.06	0.05	0.14	0.05	0.06	0.14	0.05	0.07	0.0050	0.0050	
Year 6	N leach	53	0	3.9	0	100	11	1.000	0.820	0	0	3.2	Sheep	0.67	5	0.4	Deep	0.0	0.0	0.1	0.00	0.02	0.02	0.00	0.08	0.02	0.00	0.0100	0.0100	
Year 7	Vol/NH3 Sheep NO	53	0	0.6	0	100	1	1.000	0.820	0	0	0.6	Milk/multi	5	0.1	0.0	0.0	0.0	0.1	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.0050	0.0050	
Year 8	N leach	53	0	0.6	0	100	1	1.000	0.820	0	0	0.5	Sheep	0.65	5	0.1	Deep	0.0	0.0	0.0	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.0100	0.0100	
Year 9	Vol/NH3 Sheep NO	53	0	0.1	0	100	10	1.000	0.820	0	0	0.1	Milk/multi	5	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0050	0.0050
Year 10	N leach	53	0	0.1	0	100	10	1.000	0.820	0	0	0.1	Milk/multi	5	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0050	0.0050

N2O-N in food/beverage/fuel/other

Year	N	1	0	100.0	100.0	0	100	59	0	0	0	97.8	51	30.0	4.3	0.0	0.0	0.0	25.7	4.66	1.21	1.57	2.28	4.66	2.33	1.57	2.33			
Year 1	Vol/NH3 N	1	NO	0.0	2.2	NON	100.00	MCB	1.000	NO	0	0	0	0	0	0	0	0	0.0	0.0	0.06	0.07	0.06	1.79	3.54	1.21	1.78	0.0100		
Year 2	N leach	53	0	25.4	0	100	11	1.000	0.693	0	0	67.8	Milk/multi	5	10.1	Deep	0.0	0.0	0.0	0.0	0.51	0.0200	0.0	1.70	0.0200	0.51	0.0050	0.0050		
Year 3	Vol/NH3 Sheep NO	53	0	25.4	0	100	11	1.000	0.820	0	0	25.4	Milk/multi	5	4.6	0.0	0.0	0.0	3.9	0.42	0.30	0.94	0.0	0.42	0.30	0.47	0.0100	0.0100		
Year 4	N leach	53	0	25.4	0	100	11	1.000	0.820	0	0	20.8	Sheep	0.67	5	2.6	Deep	0.0	0.0	0.6	0.01	0.16	0.69	0.01	0.16	0.01	0.0100	0.0100		
Year 5	Vol/NH3 Sheep NO	53	0	3.9	0	100	11	1.000	0.820	0	0	3.9	Milk/multi	5	0.7	0.0	0.0	0.0	0.6	0.06	0.05	0.14	0.05	0.06	0.14	0.05	0.07	0.0050	0.0050	
Year 6	N leach	53	0	3.9	0	100	11	1.000	0.820	0	0	3.2	Sheep	0.67	5	0.4	Deep	0.0	0.0	0.1	0.00	0.02	0.02	0.00	0.08	0.02	0.00	0.0100	0.0100	
Year 7	Vol/NH3 Sheep NO	53	0	0.6	0	100	1	1.000	0.820	0	0	0.6	Milk/multi	5	0.1	0.0	0.0	0.0	0.1	0.01	0.01	0.02	0.01	0.01	0.02	0.01	0.01	0.0050	0.0050	
Year 8	N leach	53	0	0.6	0	100	1	1.000	0.820	0	0	0.5	Sheep	0.65	5	0.1	Deep	0.0	0.0	0.0	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.0100	0.0100	
Year 9	Vol/NH3 Sheep NO	53	0	0.1	0	100	10	1.000	0.820	0	0	0.1	Milk/multi	5	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0050	0.0050
Year 10	N leach	53	0	0.1	0	100	10	1.000	0.820	0	0	0.1	Milk/multi	5	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0050	0.0050

Area with crop, ha

Possible additional non IPCC N2O-N emissions Value 0.0000  
 N residues emissions, ratio of N2O-N to N: 0.00  
 Increased soil N emissions, kg N2O-N/ha: 1.00  
 Natural background emissions, kg N2O-N/ha: 1.00

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE TO PRODUCE  
 AND CONTINUING WITH MANURE FROM GRAZING SHEEP TO PRODUCE TO PRODUCE

Year	Fertilizer/manure #	Store	Field	Or-ganic	Nhorm	Crop	Straw	Cereal	Use	Fodder:	N crop	Fuel/	Manure	Final	N2O-N emission	Total
	Name	1/0	1/0	1/0	propor	use &	benefit	1/0	#	Uses #21-61	#71/	other	handing	N a-	IPCC 1996	IPCC 2006
					tion, %	leach	1/0	1/0	Name	Fed	#72	#9	# Name	mounts	Each	Total

TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED																
Total N	TOTAL N AMOUNTS IN KG AND %															
Year	NH3	TOTAL N AMOUNTS IN KG AND %														
1-10	N leach	TOTAL N AMOUNTS IN KG AND % LEACHED														
		TOTAL N AMOUNTS IN KG AND %														

Year	N	1	0	100.0	100.0	0	100	59	0	0	30.0	4.3	0.0	0.0	0.0	25.7	1.86	3.58	1.10	1.41	2.30	4.62	1.41	2.13
1	Vol/NH3	N	NO	2.2	NON	100.00	MCB	1.000	NO	1.000	NO	0.83	0.0	0.0	0.0	0.0	0.0	0.02	0.0125	0.02	0.04	0.04	0.04	2.13
	N leach	1.022	1.000	ORG	1.00	1.000		0.693	0.0	0.693	0.0	5	10.1	Graz	0.0	0.0	1.70	0.0200	0.51	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	25.7	0	100	11	0	0	0	3.5	0.5	0.0	0.0	0.0	3.0	0.39	0.92	0.27	2.30	4.62	1.41	2.13	Note 45
2	Vol/NH3	Sheep	NO	1.8	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	0.0	0.0	0.0	0.02	0.0125	0.02	0.04	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	2.4	Graz	0.0	0.0	0.51	0.0200	0.15	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	3.0	0	100	11	0	0	0	0.4	0.1	0.0	0.0	0.0	0.3	0.05	0.11	0.03	2.30	4.62	1.41	2.13	Note 45
3	Vol/NH3	Sheep	NO	0.2	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.3	Graz	0.0	0.0	0.06	0.0200	0.02	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.3	0	100	1	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.01	0.01	0.00	2.30	4.62	1.41	2.13	Note 45
4	Vol/NH3	Sheep	NO	0.0	NON	100.00	SBA	1.000	NO	1.000	NO	0.65	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.01	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	10	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
5	Vol/NH3	Sheep	NO	0.0	NON	100.00	WBA	1.000	NO	1.000	NO	0.66	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	59	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
6	Vol/NH3	Sheep	NO	0.0	NON	100.00	MCB	1.000	NO	1.000	NO	0.83	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	11	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
7	Vol/NH3	Sheep	NO	0.0	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	11	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
8	Vol/NH3	Sheep	NO	0.0	NON	100.00	WWH	1.000	NO	1.000	NO	0.67	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	11	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
9	Vol/NH3	Sheep	NO	0.0	NON	100.00	SBA	1.000	NO	1.000	NO	0.65	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13
Year	N	54	0	0.0	0	100	10	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	2.30	4.62	1.41	2.13	Note 45
10	Vol/NH3	Sheep	NO	0.0	NON	100.00	WBA	1.000	NO	1.000	NO	0.66	0.0	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.04	0.04	0.04	2.13
	N leach	Graz	0.484	1.000	ORG	1.00	1.000	0.855	0.0	0.855	0.0	5	0.0	Graz	0.0	0.0	0.00	0.0200	0.00	0.04	2.27	0.68	0.04	2.13

TOTAL N AMOUNTS IN KG AND %																
Year	TOTAL N AMOUNTS IN KG AND %															
Year	Total/year 1															
Area with crop, ha	1.12															
Possible additional non IPCC N2O-N emissions	Value															
N residues emissions, ratio of N2O-N to N:	0.0000															
Increased soil N emissions, kg N2O-N/ha:	0.00															
Natural background emissions, kg N2O-N/ha:	1.00															





N CHAIN STARTING WITH N FERTILIZER TO PRODUCE CEREAL STRAW CROP FUEL/ OTHER REMOVED GOAT MILK/MEAT  
 AND CONTINUING WITH MANURE FROM GRAZING GOATS TO PRODUCE TO PRODUCE USE #21-61 #71/ bev #72 #8 #9 # Name mounts Final N a- handling N a- IPCC 1996 N2O-N emission  
 MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR

Year	Fertilizer/manure #	Store Amounts	Field 1/0	Or- ganic 1/0	Nnorm propor 1/0	Crop #	Cereal benefit 1/0	Straw used 1/0	Crop use & leach	Use #	Fodder: Uses #21-61 Fed	N crop #71/ #72	Food #8	Fuel/ other #9	Manure #	Final N a-	N2O-N emission IPCC 2006	Total							
	RATIO OF N2O-N TO N IN FIRST CROP TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED																								
	ACCORDING TO IPCC 1996 IPCC 2006																								
1-10	N leach	1.022	1.000	0.1203	0.0636	0.0825	TOTAL N AMOUNTS IN KG AND % LEACHED													3.3	3.3	2.36	4.72	1.74	2.47
	TOTAL																								
	TOTAL N AMOUNTS IN KG AND %																								

N2O-N in food/beverage/fuel/other 1.4375 0.7542 Note 46

Year	Vol/NH3	N	NO	100.0	0	100	59	0	0	97.8	61	30.0	2.9	0.0	0.0	0.0	27.1	1.89	3.61	1.38	1.91
1	N leach	1.022	1.000	2.2	NON	100.00	MCB	1.000	NO	0.83	Goat	0.83	0.83	0.0	0.0	0.0	0.0	0.02	0.0125	0.02	0.0100
Year	N leach	64	0	27.1	0	100	11	0	0	67.8	Milk/mea	6	6	10.1	Graz	0.0	0.0	1.70	0.0200	0.51	0.0100
2	N leach	Goat	NO	1.9	NON	100.00	WWH	1.000	NO	0.67	Goat	0.67	0.67	3.7	0.4	0.0	3.3	0.41	0.97	0.32	0.50
Year	N leach	64	0	3.3	0	100	11	0	0	21.6	Milk/mea	6	6	2.6	Graz	0.0	0.0	0.02	0.0125	0.02	0.0100
3	N leach	Goat	NO	0.2	NON	100.00	WWH	1.000	NO	0.67	Goat	0.67	0.67	0.4	0.0	0.0	0.4	0.05	0.12	0.04	0.06
Year	N leach	64	0	0.4	0	100	1	0	0	2.6	Milk/mea	6	6	0.3	Graz	0.0	0.0	0.07	0.0200	0.02	0.0100
4	N leach	Goat	NO	0.0	NON	100.00	SBA	1.000	NO	0.65	Goat	0.65	0.65	0.1	0.0	0.0	0.0	0.01	0.01	0.00	0.0100
Year	N leach	64	0	0.0	0	100	10	0	0	0.3	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.01	0.0200	0.00	0.0100
5	N leach	Goat	NO	0.0	NON	100.00	WBA	1.000	NO	0.66	Goat	0.66	0.66	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.0000
Year	N leach	64	0	0.0	0	100	59	0	0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100
6	N leach	Goat	NO	0.0	NON	100.00	MCB	1.000	NO	0.83	Goat	0.83	0.83	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year	N leach	64	0	0.0	0	100	11	0	0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100
7	N leach	Goat	NO	0.0	NON	100.00	WWH	1.000	NO	0.67	Goat	0.67	0.67	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year	N leach	64	0	0.0	0	100	11	0	0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100
8	N leach	Goat	NO	0.0	NON	100.00	WWH	1.000	NO	0.67	Goat	0.67	0.67	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year	N leach	64	0	0.0	0	100	10	0	0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100
9	N leach	Goat	NO	0.0	NON	100.00	SBA	1.000	NO	0.65	Goat	0.65	0.65	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year	N leach	64	0	0.0	0	100	10	0	0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100
10	N leach	Goat	NO	0.0	NON	100.00	WBA	1.000	NO	0.66	Goat	0.66	0.66	0.0	0.0	0.0	0.0	0.00	0.0125	0.00	0.0100
Year	N leach	64	0	0.0	0	100	1000	0.855	0.0	0.0	Milk/mea	6	6	0.0	0.0	0.0	0.0	0.00	0.0200	0.00	0.0100

Year 1 0.71 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.81 1.13 Total/year 1

Area with crop, ha 0.71 0.08 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.81 1.13

Possible additional non IPCC N2O-N emissions Value  
 N residues emissions, ratio of N2O-N to N: 0.0000  
 Increased soil N emissions, kg N2O-N/ha: 0.00  
 Natural background emissions, kg N2O-N/ha: 1.00

Total IPCC and non IPCC N2O 4.72 2.47 2.47 2.47 4.72 5.52  
 Kind of source Current crops 4.72  
 Total anthropogenic 4.72  
 Total including natural 5.52



Year	Fertilizer/manure #	Name	Store 1/0	Amounts	Field 1/0	Or-ganic 1/0	Nnorm propor 1/0	Crop #	Use Name	Food Fed	Fodder: Uses #21-61	N crop #71/	Food #72	Fuel/ other #9	Fuel/ bevs #8	Manure handling #	Final N a-	N2O-N emission IPCC 1996	Total	N2O-N emission Each	Total			
Total N	RATIO OF N2O-N TO N IN FIRST CROP																							
Year 1-10 N leach	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED																							
																	1.0	10.7	1.40	4.01	1.69	4.01	2.17	
																	IPCC 1996	IPCC 2006	0.11	0.11	0.11	0.11	0.11	
																	0.1022	0.0545	0.66	2.21	2.21	0.66	2.21	
																	0.1336	0.0723						
																	TOTAL	TOTAL N AMOUNTS IN KG AND % LEACHED	88.3	88.3	0.66	2.21	2.21	
																	TOTAL N AMOUNTS IN KG AND %	100.0	100.0	0.66	2.21	2.21	0.66	2.21

N2O-N in food/beverage/fuel/other

Year	Vol/NH3	Or-ganic	NON	100	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	Vol/NH3	1	NON	100.0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	1.022	ORG	1.000	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 2	72	ORG	30.0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.533	ORG	1.000	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 3	21	ORG	2.6	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 4	21	ORG	0.4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 5	21	ORG	0.1	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 6	21	ORG	0.0	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 7	72	ORG	0.0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.000	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 8	21	ORG	0.0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.000	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 9	21	ORG	0.0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Year 10	21	ORG	0.0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	N leach	0.933	ORG	1.016	1.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Year 1 0.71 0.10 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Area with crop, ha 0.71 0.10 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Possible additional non N residues	Value	Kind of source	Total IPCC and non IPCC N2O
N residues emissions, ratio of N2O-N to N:	0.0000	Current crops	4.01
Increased soil N emissions, kg N2O-N/ha:	0.00	Total anthropogenic	4.01
Natural background emissions, kg N2O-N/ha:	1.00	Total including natural	4.84

N CHAIN STARTING WITH N FERTILIZER AND CONTINUING WITH NO MANURE TO PRODUCE TO PRODUCE MAIZE COBS FOR BIOETHANOL AND NOTHING FOR FOOD FOOD

Table with columns: Year, Fertilizer/manure #, Store, Amounts, Field, Name, Or-ganic, Nnorm, Crop, Straw, Cereal, Crop, Use, Fodder, N crop, Fuel/other, Manure, Final, N2O-N emission, IPCC 2006, Total. Includes summary rows for N10 and N leach.

Table showing N2O-N in food/beverage/fuel/other for years 1-10. Columns include Year, N leach, and various N inputs/outputs for each year. Includes a 'Total' row at the bottom of the section.

Table showing emissions and background values. Columns include Year, Area with crop, ha, Possible additional non IPCC N2O-N emissions, N residues emissions, ratio of N2O-N to N, Increased soil N emissions, kg N2O-N/ha, Natural background emissions, kg N2O-N/ha, Total/year 1, Total/year 10, Total/year 100, Total IPCC and non IPCC N2O, Kind of source, Current crops, Total anthropogenic, Total including natural.

N CHAIN STARTING WITH N FERTILIZER AND CONTINUING WITH NO MANURE TO PRODUCE Cereal benefit 1/0 TO PRODUCE Straw used 1/0 Cereal benefit 1/0 Nnorm Crop # Or-ganic 1/0 Fertilizer/manure # Store Amounts Store 1/0 Name 1/0

Year	Fertilizer/manure #	Store	Amounts	Store	Field	Name	1/0	Or-ganic	1/0	Nnorm	Crop #	Use #	Fodder: Uses #21-61	Food	N crop #71/	Food/ bev #8	Fuel/ other #9	Manure handling #	Final N a-	N2O-N emission IPCC 1996	N2O-N emission IPCC 2006	Each Total	
Year 1-10																							
RATIO OF N2O-N TO N IN FIRST CROP ACCORDING TO FIRST YEAR TOTAL IPCC 1996 0.1022 IPCC 2006 0.0545 TOTAL 0.1022 0.0545																							

Year	N	1	0	100.0	100.0	2.2	NON	0	100	59	0	0	97.8	9	0.0	0.0	0.0	0.0	0.0	30.0	0	30.0	1.35	3.07	1.10	1.64
Year 1	Vol/NH3	N	NO	0.0	1.000	0.693	NO	1.000	NO	0.59	0	0	67.8	Fuel/	0.83	0.0	0.0	0.0	0.0	0.0	NONE	0	0.02	0.0125	1.10	1.64
Year 2	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	0	0	0.0	Fuel/	0.67	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 3	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	0	0	0.0	Fuel/	0.67	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 4	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	1	0	0.0	Fuel/	0.65	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 5	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	10	0	0.0	Fuel/	0.66	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 6	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	59	0	0.0	Fuel/	0.83	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 7	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	11	0	0.0	Fuel/	0.67	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 8	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	11	0	0.0	Fuel/	0.67	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 9	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	1	0	0.0	Fuel/	0.65	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year 10	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	10	0	0.0	Fuel/	0.66	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000
Year	Vol/NH3	None	NO	0.0	1.000	0.700	NO	1.000	NO	1.000	0	0	0.0	Fuel/	0.66	0.0	0.0	0.0	0.0	0.0	NONE	0	0.00	0.0000	0.00	0.0000

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Area with crop, ha		0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71

Possible additional non N residues increased soil N Natural background emissions, kg N2O-N/ha:	Value	Kind of source	Total IPCC and non IPCC N2O
	0.0000	0.00 Current crops	3.07
	0.00	0.00 Total anthropogenic	3.07
	1.00	0.71 Total including natural	3.78
			Note 50
			Note 51
			1.64 Note 51
			1.64 Note 51
			2.35 Note 51





SUMMARY CATTLE DAIRY

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER LIQUID CATTLE MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE DAIRY CATTLE DAIRY	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		9.90 9.87	1.42
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.04 10.01	0.10
1-10 N leach	0.1034	0.0583	TOTAL N AMOUNTS IN KG AND % LEACHED	80.42 80.13	0.60
TOTAL	0.1242	0.0707	TOTAL N AMOUNTS IN KG AND %	100.37 100.00	
N2O-N/N in food/beverage/fuel/other					0.2142 Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.85 1.19			Note 50
		0.85		4.58	2.97 Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER SEPARATED CATTLE MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE DAIRY CATTLE DAIRY	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		9.85 9.81	1.43
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	9.43 9.40	0.09
1-10 N leach	0.1096	0.0582	TOTAL N AMOUNTS IN KG AND % LEACHED	81.10 80.79	0.61
TOTAL	0.1322	0.0709	TOTAL N AMOUNTS IN KG AND %	100.38 100.00	
N2O-N/N in food/beverage/fuel/other					0.2161 Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.84 1.18			Note 50
		0.84		4.81	2.97 Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER CATTLE DEEP LITTER	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE DAIRY CATTLE DAIRY	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		9.58 9.25	1.44
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.16 9.81	0.10
1-10 N leach	0.1160	0.0583	TOTAL N AMOUNTS IN KG AND % LEACHED	83.84 80.95	0.63
TOTAL	0.1422	0.0723	TOTAL N AMOUNTS IN KG AND %	103.58 100.00	
N2O-N/N in food/beverage/fuel/other					0.2264 Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.81 1.14			Note 50
		0.81		5.08	2.98 Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER MANURE FROM GRAZING CATTLE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE DAIRY CATTLE DAIRY	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		9.50 9.50	1.83
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	3.86 3.86	0.04
1-10 N leach	0.1164	0.0687	TOTAL N AMOUNTS IN KG AND % LEACHED	86.64 86.64	0.65
TOTAL	0.1444	0.0839	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	
N2O-N/N in food/beverage/fuel/other					0.2647 Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.79 1.10			Note 50
		0.79		5.12	3.30 Note 51



SUMMARY CATTLE BEEF

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER LIQUID CATTLE MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE BEEF CATTLE BEEF	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.79 8.76	2.15 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.48 10.44	Note 45
1-10 N leach	0.1035	0.0585	TOTAL N AMOUNTS IN KG AND % LEACHED	81.12 80.81	Note 45
TOTAL	0.1254	0.0716	TOTAL N AMOUNTS IN KG AND %	100.39 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.4279	0.2444	Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.86 1.20		Note 50
		0.86	4.62	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER SEPARATED CATTLE MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE BEEF CATTLE BEEF	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.74 8.70	2.16 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	9.83 9.79	Note 45
1-10 N leach	0.1100	0.0584	TOTAL N AMOUNTS IN KG AND % LEACHED	81.83 81.51	Note 45
TOTAL	0.1339	0.0718	TOTAL N AMOUNTS IN KG AND %	100.40 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.4596	0.2466	Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.85 1.19		Note 50
		0.81	4.87	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER CATTLE DEEP LITTER	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE BEEF CATTLE BEEF	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.49 8.18	2.20 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.58 10.20	Note 45
1-10 N leach	0.1166	0.0584	TOTAL N AMOUNTS IN KG AND % LEACHED	84.70 81.62	Note 45
TOTAL	0.1444	0.0732	TOTAL N AMOUNTS IN KG AND %	103.77 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.5104	0.2589	Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.82 1.14		Note 50
		0.82	5.15	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER MANURE FROM GRAZING CATTLE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	CATTLE BEEF CATTLE BEEF	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.41 8.41	2.56 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	3.95 3.95	Note 45
1-10 N leach	0.1171	0.0694	TOTAL N AMOUNTS IN KG AND % LEACHED	87.64 87.64	Note 45
TOTAL	0.1466	0.0854	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.5227	0.3045	Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.79 1.11		Note 50
		0.79	5.19	Note 51

SUMMARY PIG PORK

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER LIQUID PIG MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	PIG PORK PIG PORK	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		14.13	1.33
Year N NH3	IPCC 1996	IPCC 2006		9.18	0.09
1-10 N leach	0.1035	0.0578	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	76.68	0.58
TOTAL	0.1183	0.0666	TOTAL N AMOUNTS IN KG AND % LEACHED	100.00	
			TOTAL N AMOUNTS IN KG AND %	100.00	

N2O-N/N in food/beverage/fuel/other		0.2512		0.1415	Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.82		1.15	Note 50
		0.82		4.37	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER SEPARATED PIG MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	PIG PORK PIG PORK	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		13.86	1.32
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	9.73	0.10
1-10 N leach	0.1083	0.0579	TOTAL N AMOUNTS IN KG AND % LEACHED	76.79	0.58
TOTAL	0.1233	0.0665	TOTAL N AMOUNTS IN KG AND %	100.38	
			TOTAL N AMOUNTS IN KG AND %	100.00	

N2O-N/N in food/beverage/fuel/other		0.2669		0.1439	Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.80		1.12	Note 50
		0.80		4.50	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER PIG DEEP LITTER	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	PIG PORK PIG PORK	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		13.87	1.32
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	11.11	0.11
1-10 N leach	0.1124	0.0581	TOTAL N AMOUNTS IN KG AND % LEACHED	76.86	0.58
TOTAL	0.1280	0.0668	TOTAL N AMOUNTS IN KG AND %	101.84	
			TOTAL N AMOUNTS IN KG AND %	100.00	

N2O-N/N in food/beverage/fuel/other		0.2769		0.1444	Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.80		1.12	Note 50
		0.80		4.64	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER MANURE FROM ROOTING PIGS	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	PIG PORK PIG PORK	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		14.15	1.71
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	3.58	0.04
1-10 N leach	0.1139	0.0662	TOTAL N AMOUNTS IN KG AND % LEACHED	82.28	0.62
TOTAL	0.1363	0.0786	TOTAL N AMOUNTS IN KG AND %	100.00	
			TOTAL N AMOUNTS IN KG AND %	100.00	

N2O-N/N in food/beverage/fuel/other		0.2890		0.1667	Note 46
Area with crop, ha		Total/year 1			
Natural background emissions, kg N2O-N/ha:		0.80		1.12	Note 50
		0.80		4.89	Note 51

SUMMARY POULTRY MEAT

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER LIQUID POULTRY MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY MEAT POULTRY MEAT	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		16.74 16.74	1.30
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	7.43 7.43	0.07
1-10 N leach	0.1031	0.0572	TOTAL N AMOUNTS IN KG AND % LEACHED	75.83 75.83	0.57
TOTAL	0.1161	0.0648	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	

N2O-N/N in food/beverage/fuel/other 0.2081 0.1160 Note 46

Area with crop, ha Total/year 1 0.79 1.11 Note 50  
 Natural background emissions, kg N2O-N/ha: 0.79 2.74 Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER SEPARATED POULTRY MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY MEAT POULTRY MEAT	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		16.48 16.48	1.26
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	9.13 9.13	0.09
1-10 N leach	0.1073	0.0576	TOTAL N AMOUNTS IN KG AND % LEACHED	74.39 74.39	0.56
TOTAL	0.1183	0.0638	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	

N2O-N/N in food/beverage/fuel/other 0.2153 0.1161 Note 46

Area with crop, ha Total/year 1 0.78 1.09 Note 50  
 Natural background emissions, kg N2O-N/ha: 0.78 2.69 Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER POULTRY DEEP LITTER	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY MEAT POULTRY MEAT	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		15.94 15.92	1.23
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.65 10.64	0.11
1-10 N leach	0.1101	0.0579	TOTAL N AMOUNTS IN KG AND % LEACHED	73.52 73.44	0.55
TOTAL	0.1191	0.0629	TOTAL N AMOUNTS IN KG AND %	100.12 100.00	

N2O-N/N in food/beverage/fuel/other 0.2242 0.1184 Note 46

Area with crop, ha Total/year 1 0.75 1.05 Note 50  
 Natural background emissions, kg N2O-N/ha: 0.75 2.64 Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER MANURE FROM SCRAPING POULTRY	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY MEAT POULTRY MEAT	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		16.38 16.38	1.58
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	3.30 3.30	0.03
1-10 N leach	0.1120	0.0643	TOTAL N AMOUNTS IN KG AND % LEACHED	80.31 80.31	0.60
TOTAL	0.1302	0.0740	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	

N2O-N/N in food/beverage/fuel/other 0.2384 0.1355 Note 46

Area with crop, ha Total/year 1 0.76 1.07 Note 50  
 Natural background emissions, kg N2O-N/ha: 0.76 2.98 Note 51

SUMMARY POULTRY EGGS

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER LIQUID POULTRY MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY EGGS POULTRY EGGS	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.34 8.34	2.14 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.74 10.74	Note 45
1-10 N leach	0.1037	0.0587	TOTAL N AMOUNTS IN KG AND % LEACHED	80.92 80.92	Note 45
TOTAL	0.1249	0.0712	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.4493	0.2562	Note 46
Area with crop, ha	Total/year 1			
Natural background emissions, kg N2O-N/ha:	0.84	1.18		Note 50
	0.84		4.59	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER SEPARATED POULTRY MANURE	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY EGGS POULTRY EGGS	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.13 8.13	2.09 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	13.41 13.41	Note 45
1-10 N leach	0.1101	0.0593	TOTAL N AMOUNTS IN KG AND % LEACHED	78.46 78.46	Note 45
TOTAL	0.1282	0.0695	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.4728	0.2565	Note 46
Area with crop, ha	Total/year 1			
Natural background emissions, kg N2O-N/ha:	0.82	1.15		Note 50
	0.82		4.66	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER POULTRY DEEP LITTER	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY EGGS POULTRY EGGS	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		7.71 7.70	2.04 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	15.60 15.57	Note 45
1-10 N leach	0.1144	0.0598	TOTAL N AMOUNTS IN KG AND % LEACHED	76.88 76.73	Note 45
TOTAL	0.1290	0.0678	TOTAL N AMOUNTS IN KG AND %	100.19 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.5021	0.2639	Note 46
Area with crop, ha	Total/year 1			
Natural background emissions, kg N2O-N/ha:	0.77	1.08		Note 50
	0.77		4.64	Note 51

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER MANURE FROM SCRAPING POULTRY	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	POULTRY EGGS POULTRY EGGS	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		8.06 8.06	2.58 Note 45
Year N NH3	IPCC 1996	IPCC 2006	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	3.98 3.98	Note 45
1-10 N leach	0.1174	0.0697	TOTAL N AMOUNTS IN KG AND % LEACHED	87.97 87.97	Note 45
TOTAL	0.1474	0.0859	TOTAL N AMOUNTS IN KG AND %	100.00 100.00	Note 45

N2O-N/N in food/beverage/fuel/other		0.5488	0.3200	Note 46
Area with crop, ha	Total/year 1			
Natural background emissions, kg N2O-N/ha:	0.79	1.11		Note 50
	0.79		5.21	Note 51

SUMMARY SHEEP AND GOATS

N CHAIN STARTING WITH N FERTILIZER N CHAIN STARTING WITH N FERTILIZER  
 AND CONTINUING WITH SHEEP DEEP LITTER AND CONTINUING WITH SHEEP DEEP LITTER

Total N	RATIO OF N2O-N TO N IN FIRST CROP	TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND	SHEEP MILK/MUTTON	Note 43
Year N NH3	IPCC 1996	TO PRODUCE	WINTER WHEAT FOR	SHEEP MILK/MUTTON	Note 43
1-10 N leach	0.1181	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		5.03	2.33
	0.1552	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3		6.76	0.07
TOTAL		TOTAL N AMOUNTS IN KG AND % LEACHED		92.40	0.69
		TOTAL N AMOUNTS IN KG AND %		104.18	

N2O-N/N in food/beverage/fuel/other

Area with crop, ha  
 Natural background emissions, kg N2O-N/ha:

N CHAIN STARTING WITH N FERTILIZER N CHAIN STARTING WITH N FERTILIZER  
 AND CONTINUING WITH MANURE FROM GRAZING SHEEP AND CONTINUING WITH MANURE FROM GRAZING SHEEP

Total N	RATIO OF N2O-N TO N IN FIRST CROP	TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND	SHEEP MILK/MUTTON	Note 43
Year N NH3	IPCC 1996	TO PRODUCE	WINTER WHEAT FOR	SHEEP MILK/MUTTON	Note 43
1-10 N leach	0.1194	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		4.82	2.13
	0.1540	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3		4.24	0.04
TOTAL		TOTAL N AMOUNTS IN KG AND % LEACHED		90.94	0.68
		TOTAL N AMOUNTS IN KG AND %		100.00	

N2O-N/N in food/beverage/fuel/other

Area with crop, ha  
 Natural background emissions, kg N2O-N/ha:

N CHAIN STARTING WITH N FERTILIZER N CHAIN STARTING WITH N FERTILIZER  
 AND CONTINUING WITH GOAT DEEP LITTER AND CONTINUING WITH GOAT DEEP LITTER

Total N	RATIO OF N2O-N TO N IN FIRST CROP	TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND	GOAT MILK/MEAT	Note 43
Year N NH3	IPCC 1996	TO PRODUCE	WINTER WHEAT FOR	GOAT MILK/MEAT	Note 43
1-10 N leach	0.1189	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		3.27	2.29
	0.1499	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3		14.44	0.14
TOTAL		TOTAL N AMOUNTS IN KG AND % LEACHED		86.53	0.65
		TOTAL N AMOUNTS IN KG AND %		104.25	

N2O-N/N in food/beverage/fuel/other

Area with crop, ha  
 Natural background emissions, kg N2O-N/ha:

N CHAIN STARTING WITH N FERTILIZER N CHAIN STARTING WITH N FERTILIZER  
 AND CONTINUING WITH MANURE FROM GRAZING GOATS AND CONTINUING WITH MANURE FROM GRAZING GOATS

Total N	RATIO OF N2O-N TO N IN FIRST CROP	TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND	GOAT MILK/MEAT	Note 43
Year N NH3	IPCC 1996	TO PRODUCE	WINTER WHEAT FOR	GOAT MILK/MEAT	Note 43
1-10 N leach	0.1203	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED		3.28	2.47
	0.1572	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3		4.36	0.04
TOTAL		TOTAL N AMOUNTS IN KG AND % LEACHED		92.36	0.69
		TOTAL N AMOUNTS IN KG AND %		100.00	

N2O-N/N in food/beverage/fuel/other

Area with crop, ha  
 Natural background emissions, kg N2O-N/ha:

N2O-N/N in food/beverage/fuel/other

SUMMARY N CROP

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER GREEN MANURE HIGH N	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	HIGH N CROP CATTLE DAIRY		Note 43 Note 43
Total N Year N NH3 1-10 N leach	RATIO OF N2O-N TO N IN FIRST CROP ACCORDING TO FIRST YEAR TOTAL	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED IPCC 2006	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	1.74 1.74	1.72 4.01	1.43 2.20 Note 45
		0.0545	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	11.48 11.47	0.11	Note 45
		0.0732	TOTAL N AMOUNTS IN KG AND % LEACHED	86.86 86.79	0.65	Note 45
			TOTAL N AMOUNTS IN KG AND %	100.08 100.00		Note 45

N2O-N/N in food/beverage/fuel/other		2.2976		1.2594 Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.92 1.29		Note 50
		0.92	4.93	3.12 Note 51

N amount in reference crop year 2 after use of N crop as green manure, kg	6.30			Note 47
N amount in reference crop year 1 after synthetic N fertilizer, kg	30.00			Note 47
Relative value of green manure, %	21.00			

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER GREEN MANURE LOW N	TO PRODUCE TO PRODUCE	MAIZE COBS FOR BIOETHANOL AND WINTER WHEAT FOR	LOW N CROP CATTLE DAIRY		Note 43 Note 43
Total N Year N NH3 1-10 N leach	RATIO OF N2O-N TO N IN FIRST CROP ACCORDING TO FIRST YEAR TOTAL	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED IPCC 2006	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	1.00 1.00	1.69 4.01	1.40 2.17 Note 45
		0.0545	TOTAL N AMOUNTS IN KG AND % VOLATILISATION/NH3	10.72 10.71	0.11	Note 45
		0.0723	TOTAL N AMOUNTS IN KG AND % LEACHED	88.34 88.29	0.66	Note 45
			TOTAL N AMOUNTS IN KG AND %	100.05 100.00		Note 45

N2O-N/N in food/beverage/fuel/other		4.0245		2.170 Note 46
Area with crop, ha		Total/year 1		
Natural background emissions, kg N2O-N/ha:		0.83 1.17		Note 50
		0.83	4.84	3.00 Note 51

N amount in reference crop year 2 after use of N crop as green manure, kg	3.60			Note 47
N amount in reference crop year 1 after synthetic N fertilizer, kg	30.00			Note 47
Relative value of green manure, %	12.00			

SUMMARY FOOD, FUEL, AND WASTE

N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER NO MANURE	MAIZE COBS FOR BIOETHANOL AND NOTHING FOR	FOOD FOOD	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	30.00 30.00	1.10
Year N NH3	IPCC 1996	IPCC 2006	2.20 2.20	0.02
1-10 N leach	FIRST YEAR	0.0545	67.80 67.80	0.51
TOTAL	0.1022	0.0545	100.00 100.00	
TOTAL N AMOUNTS IN KG AND %				
N2O-N/N in food/beverage/fuel/other			0.1022	0.0545
Area with crop, ha		Total/year 1	1.00	
Natural background emissions, kg N2O-N/ha:		0.71		Note 50
		0.71	3.78	Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER NO MANURE	MAIZE COBS FOR BIOETHANOL AND NOTHING FOR	FUEL FUEL	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	30.00 30.00	1.10
Year N NH3	IPCC 1996	IPCC 2006	2.20 2.20	0.02
1-10 N leach	FIRST YEAR	0.0545	67.80 67.80	0.51
TOTAL	0.1022	0.0545	100.00 100.00	
TOTAL N AMOUNTS IN KG AND %				
N2O-N/N in food/beverage/fuel/other			0.1022	0.0545
Area with crop, ha		Total/year 1	1.00	
Natural background emissions, kg N2O-N/ha:		0.71		Note 50
		0.71	3.78	Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER NO MANURE	MAIZE COBS FOR BIOETHANOL AND NOTHING FOR	WASTE DUMPED ELSEWHERE WITHOUT LEACHING WASTE, DUMPED ELSEWHERE	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	30.00 30.00	1.10
Year N NH3	IPCC 1996	IPCC 2006	2.20 2.20	0.02
1-10 N leach	FIRST YEAR	0.0545	67.80 67.80	0.51
TOTAL	0.1022	0.0545	100.00 100.00	
TOTAL N AMOUNTS IN KG AND %				
N2O-N/N in food/beverage/fuel/other			No use	No use
Area with crop, ha		Total/year 1	1.00	
Natural background emissions, kg N2O-N/ha:		0.71		Note 50
		0.71	3.78	Note 51
N CHAIN STARTING WITH AND CONTINUING WITH	N FERTILIZER NO MANURE	MAIZE COBS FOR BIOETHANOL AND NOTHING FOR	WASTE DUMPED IN FIELD AND LOST TO LEACH WASTE DUMPED IN FIELD	Note 43 Note 43
Total N	RATIO OF N2O-N TO N IN FIRST CROP	TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED	0.00 0.00	1.10
Year N NH3	IPCC 1996	IPCC 2006	2.20 2.20	0.02
1-10 N leach	FIRST YEAR	0.0620	97.80 97.80	0.73
TOTAL	0.1272	0.0620	100.00 100.00	
TOTAL N AMOUNTS IN KG AND %				
N2O-N/N in food/beverage/fuel/other			No use	No use
Area with crop, ha		Total/year 1	1.00	
Natural background emissions, kg N2O-N/ha:		0.71		Note 50
		0.71	4.53	Note 51

SUMMARY CATTLE RATIO OF N2O-N TO N IN FIRST CROP  
 ACCORDING TO IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 FIRST YEAR 0.1034 0.1171 0.0582 0.0694  
 TOTAL 0.1242 0.1466 0.0707 0.0854

N2O-N emission N2O-N emission  
 IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 3.72 4.40 2.12 2.56

N2O-N/N in food/beverage/fuel/other

MIN MAX MIN MAX  
 0.3761 0.5227 0.2142 0.3045

Natural background emissions in kg N2O-N/ha, area with crop in ha, and total emissions in kg N2O-N/ha:

MIN MAX  
 0.79 0.86  
 MIN MAX  
 0.79 1.11

4.58 5.19 2.97 3.35

SUMMARY PIGS RATIO OF N2O-N TO N IN FIRST CROP  
 ACCORDING TO IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 FIRST YEAR 0.1035 0.1139 0.0578 0.0662  
 TOTAL 0.1183 0.1363 0.0665 0.0786

N2O-N emission N2O-N emission  
 IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 3.55 4.09 1.99 2.36

N2O-N/N in food/beverage/fuel/other

MIN MAX MIN MAX  
 0.2512 0.2890 0.1415 0.1667

Natural background emissions in kg N2O-N/ha, area with crop in ha, and total emissions in kg N2O-N/ha:

MIN MAX  
 0.80 0.82  
 MIN MAX  
 0.80 0.82

4.37 4.89 2.80 3.16

SUMMARY POULTRY RATIO OF N2O-N TO N IN FIRST CROP  
 ACCORDING TO IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 FIRST YEAR 0.1031 0.1174 0.0572 0.0697  
 TOTAL 0.1161 0.1474 0.0629 0.0859

N2O-N emission N2O-N emission  
 IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 3.48 4.42 1.89 2.58

N2O-N/N in food/beverage/fuel/other

MIN MAX MIN MAX  
 0.2081 0.5488 0.1160 0.3200

Natural background emissions in kg N2O-N/ha, area with crop in ha, and total emissions in kg N2O-N/ha:

MIN MAX  
 0.75 0.84  
 MIN MAX  
 0.75 0.84

4.28 5.21 2.64 3.37

SUMMARY SHEEP AND GOATS RATIO OF N2O-N TO N IN FIRST CROP  
 ACCORDING TO IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 FIRST YEAR 0.1181 0.1203 0.0545 0.0636  
 TOTAL 0.1499 0.1572 0.0712 0.0825

N2O-N emission N2O-N emission  
 IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 4.5 4.72 2.13 2.47

N2O-N/N in food/beverage/fuel/other

MIN MAX MIN MAX  
 0.9263 1.4375 0.4430 0.7542

Natural background emissions in kg N2O-N/ha, area with crop in ha, and total emissions in kg N2O-N/ha:

MIN MAX  
 0.80 0.83  
 MIN MAX  
 0.80 0.83

5.32 5.52 2.94 3.28

SUMMARY FODDER RATIO OF N2O-N TO N IN FIRST CROP  
 ACCORDING TO IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 FIRST YEAR 0.1031 0.1203 0.0545 0.0697  
 TOTAL 0.1161 0.1572 0.0629 0.0859

N2O-N emission N2O-N emission  
 IPCC 1996 IPCC 2006  
 MIN MAX MIN MAX  
 3.48 4.72 1.89 2.58

N2O-N/N in food/beverage/fuel/other

MIN MAX MIN MAX  
 0.2081 1.4375 0.1160 0.7542

Natural background emissions in kg N2O-N/ha, area with crop in ha, and total emissions in kg N2O-N/ha:

MIN MAX  
 0.75 0.86  
 MIN MAX  
 0.75 1.11

4.28 5.52 2.64 3.37