

| Crop, fodder/food | WRS | WWH | WWB | WBA | WBE | WYB | WYB | TRB | SBB | SWB | OAB | MCC | MCW | GRO | GCR | GCR | GHP | GRP | CGR0 | CONC | |
|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|-------|------|
| Crop # | 22 | 11 | 13 | 10 | 14 | 16 | 14 | 16 | 19 | 29 | 39 | 3 | 5 | 216 | 263 | 260 | 261 | 2520 | 252 | 2610 | 9999 |
| <NUE/e> | 0.64 | 0.64 | 0.54 | 0.60 | 0.59 | 0.53 | 0.60 | 0.58 | 0.60 | 0.58 | 0.73 | 0.62 | 1.05 | 0.83 | 1.33 | 1.68 | 11.68 | 0.44 | 0.81 | -2.75 | 1.00 |
| N digestibility, food/fodder crops | 0.84 | 0.67 | 0.68 | 0.66 | 0.62 | 0.65 | 0.65 | 0.67 | 0.64 | 0.67 | 0.64 | 0.62 | 0.63 | 0.78 | 0.80 | 0.80 | 0.66 | 0.78 | 0.80 | 0.80 | 0.87 |
| <NUE/e> addition before cereal | 0.07 | 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 | 0.11 | 0.04 | 0.00 | 0.00 | 0.00 | -0.81 | 0.00 |
| <NUE/e> addition from straw | 0.15 | 0.11 | 0.09 | 0.12 | 0.17 | 0.13 | 0.12 | 0.07 | 0.13 | 0.12 | 0.07 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Recalculated N norm, kg N/ha | 144 | 157 | 198 | 147 | 117 | 141 | 118 | 118 | 118 | 118 | 93 | 140 | 160 | 309 | 199 | 21 | 132 | 132 | 132 | -87 | |

| Crop, PPO/biodiesel/bioethanol | WRB | WWHB | WWBB | WBB | WYB | WYB | TRB | SBB | SWB | OAB | MCB |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|-----|
| Crop # | 229 | 119 | 139 | 109 | 149 | 169 | 19 | 29 | 39 | 59 | |
| <NUE/e> | 0.64 | 0.64 | 0.54 | 0.60 | 0.59 | 0.53 | 0.60 | 0.58 | 0.73 | 0.62 | |
| N digestibility, other crop parts | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.83 | |
| <NUE/e> addition before cereal | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| <NUE/e> addition from straw | 0.15 | 0.11 | 0.09 | 0.12 | 0.17 | 0.13 | 0.12 | 0.07 | 0.13 | 0.00 | |
| Recalculated N norm, kg N/ha | 144 | 157 | 198 | 147 | 117 | 141 | 118 | 118 | 93 | 140 | |

| <NUE/e> amounts from crop res | 0.03 | 0.11 | 0.09 | 0.08 | 0.15 | 0.12 | 0.09 | 0.12 | 0.11 | 0.21 | 0.04 | 0.04 | 0.13 | 1.28 | 0.15 | 0.15 | -0.30 |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| <NUE/e> amounts from N fixation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.31 | 7.97 | 0.00 | 0.00 | -2.70 |

| Manure/ferti- lizer kind, # | None | 0 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 | 6 | 6 | 71 | 72 | None |
|-----------------------------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|
| Manure handling | None | None | Liquid | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | Deep | high N | low N | None |
| Manure+straw, relative | 1.000 | 1.016 | 1.016 | 1.159 | 1.000 | 1.000 | 1.024 | 1.127 | 1.000 | 1.000 | 1.000 | 1.013 | 1.000 | 1.162 | 1.000 | 1.162 | 1.000 | 1.162 | 1.000 | 1.000 | 1.000 | 0 |
| Vol/NH3 House | 0.000 | 0.080 | 0.050 | 0.060 | 0.000 | 0.140 | 0.180 | 0.250 | 0.000 | 0.100 | 0.250 | 0.400 | 0.000 | 0.150 | 0.000 | 0.150 | 0.000 | 0.150 | 0.000 | 0.000 | 0.000 | 0 |
| Vol/NH3 Store | 0.000 | 0.022 | 0.085 | 0.300 | 0.000 | 0.027 | 0.214 | 0.400 | 0.000 | 0.020 | 0.150 | 0.175 | 0.000 | 0.150 | 0.000 | 0.150 | 0.000 | 0.150 | 0.000 | 0.000 | 0.000 | 0 |
| % use of field store | | | 20 | | | 70 | | | | | 85 | | | | | | | | | | | |
| Vol/NH3 Field | 0.000 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.070 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0.250 | 0 |
| N efficiency | 0.000 | 0.700 | 0.650 | 0.450 | 0.750 | 0.650 | 0.650 | 0.650 | 0.650 | 0.650 | 0.650 | 0.650 | 0.450 | 0.450 | 0.450 | 0.450 | 0.450 | 0.450 | 0.450 | 0.700 | 0.400 | 0 |
| N-Vol/NH3 efficiency | 1.022 | 0.933 | 0.867 | 0.600 | 0.484 | 1.000 | 0.867 | 0.867 | 0.699 | 0.867 | 0.867 | 0.867 | 0.600 | 0.484 | 0.600 | 0.484 | 0.600 | 0.484 | 0.600 | 0.933 | 0.533 | 0 |

| Use Kind | Waste moved in field | Cattle Dairy | Cattle Beef | Pig Pork | Poultry Meat | Poultry Eggs | Sheep Milk/mutton | Goat Milk/meat | N crop high N | N crop low N | Food/ beverage | Fuel/ other |
|----------------|----------------------|--------------|-------------|----------|--------------|--------------|-------------------|----------------|---------------|--------------|----------------|-------------|
| # | -1 | 0 | 21 | 32 | 42 | 43 | 51 | 61 | 71 | 72 | 8 | |
| Fodder to food | N eff | 0.264 | 0.227 | 0.418 | 0.510 | 0.241 | 0.142 | 0.096 | | | | |
| Fodder to food | N eff | 0.264 | 0.146 | 0.269 | 0.328 | 0.272 | 0.142 | 0.096 | | | | |
| Fodder to food | ND eff | 0.351 | 0.310 | | | | | | | | | |
| Fodder to food | ND eff | 0.351 | 0.199 | | | | | | | | | |

| Ratios of N2O-N to N according to Fertilizer/manure | IPCC 1996 (current inventories) | IPCC 2006 (newest values, not yet used for inventories) |
|---|---------------------------------|---|
| Handling/ Slurry and liquid manure | N Animal Green | N Animal Green |
| house/store | 0 0.0010 | 0 0.0050 |
| Application/field | 0 0.0200 | 0 0.0050 |
| Grazing, others | 0.0125 0.0125 0.0125 | 0.0100 0.0100 0.0100 |
| Volatilisation/NH3 | 0 0.0200 | 0 0.0200 |
| Crop residues | 0 0.0200 | 0 0.0100 |
| N fixing crops | 0 0.0100 | 0 0.0100 |
| Leaching | 0 0.0000 | 0 0.0000 |
| | 0.0250 0.0250 0.0250 | 0.0075 0.0075 0.0075 |

N CHAIN STARTING WITH N FERTILIZER TO PRODUCE CEREAL Straw Crop N crop Food/ Fuel/ CATTLE DAIRY
 AND CONTINUING WITH LIQUID CATTLE MANURE TO PRODUCE use & #71/ bev other CATTLE DAIRY

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

| | | | |
|-----------------------------------|--------|---|-------|
| RATIO OF N2O-N TO N IN FIRST CROP | | TOTAL N AMOUNTS IN KG AND % ENDING AS FOOD/FUEL/OTHER/REMOVED | |
| Total N | 100.0 | 100.0 | 48.5 |
| Year N NH3 | 0.0 | 0.0 | 25.4 |
| 1-10 N leach | 1.022 | 1.113 | 27.2 |
| TOTAL | 0.0195 | 0.0163 | 101.1 |
| | 0.0347 | 0.0280 | 100.0 |

N2O-N in food/beverage/fuel/other

| | | | | | | | | | | | | | | | | | | | | | | |
|------|---------|--------|----|-------|-------|-----|--------|-------|-------|------|------|--------|-----|------|--------|--------|------|--------|--------|--------|---------|---------|
| Year | N | 1 | 0 | 100.0 | 100.0 | 1 | 1 | 97.8 | 21 | 71.3 | 21.0 | 0.0 | 0.0 | 14.5 | 21 | 50.2 | 2.04 | 2.98 | 1.94 | 2.40 | Note 45 | |
| 1 | Vol/NH3 | N | NO | 0.0 | 2.2 | NON | 100.00 | WRS | 1.113 | YES | 0.84 | 0.0 | 0.0 | 0.0 | 12.0 | Cattle | 0.06 | 0.125 | 0.06 | 0.100 | Note 47 | |
| | N leach | | | 1.000 | 1.022 | ORG | 1.00 | 1.113 | 0.271 | 14.5 | 12.0 | Dairy | 2 | 3.0 | Liquid | 4.0 | 0.30 | 0.0010 | 0.09 | 0.0050 | Note 48 | |
| Year | N | 21 | 0 | 47.0 | 47.0 | 0 | 100 | 11 | 0 | 21 | 5.0 | 0.0 | 0.0 | 3.9 | 21 | 16.2 | 0.50 | 0.89 | 0.47 | 0.68 | Note 49 | |
| 2 | Vol/NH3 | Cattle | NO | 0.0 | 11.7 | NON | 100.00 | WWH | 1.000 | YES | 0.67 | 0.0 | 0.0 | 0.0 | 10.2 | Cattle | 1.3 | 0.13 | 0.13 | 0.0100 | Note 48 | |
| | N leach | Liquid | | 1.016 | 15.1 | ORG | 1.00 | 1.000 | 0.400 | 3.9 | 10.2 | Dairy | 2 | 3.8 | Liquid | 0.0 | 0.26 | 0.0010 | 0.08 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 15.1 | 15.1 | 0 | 100 | 11 | 0 | 21 | 1.6 | 0.0 | 0.0 | 1.3 | 21 | 5.2 | 0.16 | 0.29 | 0.15 | 0.22 | Note 47 | |
| 3 | Vol/NH3 | Cattle | NO | 0.0 | 3.8 | NON | 100.00 | WWH | 1.000 | YES | 0.67 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.4 | 0.04 | 0.04 | 0.0100 | Note 48 | |
| | N leach | Liquid | | 1.016 | 4.9 | ORG | 1.00 | 1.000 | 0.400 | 1.3 | 1.2 | Liquid | 2 | 1.2 | Liquid | 0.0 | 0.08 | 0.0010 | 0.02 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 4.9 | 4.9 | 0 | 100 | 1 | 0 | 21 | 0.5 | 0.0 | 0.0 | 0.4 | 21 | 1.6 | 0.05 | 0.09 | 0.05 | 0.07 | Note 47 | |
| 4 | Vol/NH3 | Cattle | NO | 0.0 | 1.2 | NON | 100.00 | SBA | 1.000 | YES | 0.65 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.1 | 0.01 | 0.01 | 0.0100 | Note 48 | |
| | N leach | Liquid | | 1.016 | 1.5 | ORG | 1.00 | 1.000 | 0.443 | 0.4 | 1.2 | Dairy | 2 | 0.3 | Liquid | 0.0 | 0.03 | 0.0010 | 0.01 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 1.5 | 1.5 | 0 | 100 | 10 | 0 | 21 | 0.1 | 0.0 | 0.0 | 0.1 | 21 | 0.5 | 0.02 | 0.03 | 0.01 | 0.02 | Note 47 | |
| 5 | Vol/NH3 | Cattle | NO | 0.0 | 0.4 | NON | 100.00 | WBA | 1.000 | YES | 0.66 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.4 | ORG | 1.00 | 1.000 | 0.444 | 0.1 | 0.4 | Dairy | 2 | 0.1 | Liquid | 0.0 | 0.01 | 0.0010 | 0.00 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 0.4 | 0.4 | 0 | 100 | 22 | 1 | 21 | 0.2 | 0.1 | 0.0 | 0.0 | 21 | 0.2 | 0.00 | 0.01 | 0.00 | 0.01 | Note 47 | |
| 6 | Vol/NH3 | Cattle | NO | 0.0 | 0.1 | NON | 100.00 | WRS | 1.113 | YES | 0.84 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.1 | ORG | 1.00 | 1.113 | 0.335 | 0.0 | 0.1 | Dairy | 2 | 0.0 | Liquid | 0.0 | 0.00 | 0.0010 | 0.00 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 0.1 | 0.1 | 0 | 100 | 11 | 0 | 21 | 0.0 | 0.0 | 0.0 | 0.0 | 21 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | Note 47 | |
| 7 | Vol/NH3 | Cattle | NO | 0.0 | 0.0 | NON | 100.00 | WWH | 1.000 | YES | 0.67 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.0 | ORG | 1.00 | 1.000 | 0.400 | 0.0 | 0.0 | Dairy | 2 | 0.0 | Liquid | 0.0 | 0.00 | 0.0010 | 0.00 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 0.0 | 0.0 | 0 | 100 | 11 | 0 | 21 | 0.0 | 0.0 | 0.0 | 0.0 | 21 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | Note 47 | |
| 8 | Vol/NH3 | Cattle | NO | 0.0 | 0.0 | NON | 100.00 | WWH | 1.000 | YES | 0.67 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.0 | ORG | 1.00 | 1.000 | 0.400 | 0.0 | 0.0 | Dairy | 2 | 0.0 | Liquid | 0.0 | 0.00 | 0.0010 | 0.00 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 0.0 | 0.0 | 0 | 100 | 1 | 0 | 21 | 0.0 | 0.0 | 0.0 | 0.0 | 21 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | Note 47 | |
| 9 | Vol/NH3 | Cattle | NO | 0.0 | 0.0 | NON | 100.00 | SBA | 1.000 | YES | 0.65 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.0 | ORG | 1.00 | 1.000 | 0.443 | 0.0 | 0.0 | Dairy | 2 | 0.0 | Liquid | 0.0 | 0.00 | 0.0010 | 0.00 | 0.0050 | Note 49 | |
| Year | N | 21 | 0 | 0.0 | 0.0 | 0 | 100 | 10 | 0 | 21 | 0.0 | 0.0 | 0.0 | 0.0 | 21 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | Note 47 | |
| 10 | Vol/NH3 | Cattle | NO | 0.0 | 0.0 | NON | 100.00 | WBA | 1.000 | YES | 0.66 | 0.0 | 0.0 | 0.0 | 0.0 | Cattle | 0.0 | 0.00 | 0.0125 | 0.00 | 0.0100 | Note 48 |
| | N leach | Liquid | | 1.016 | 0.0 | ORG | 1.00 | 1.000 | 0.444 | 0.0 | 0.0 | Dairy | 2 | 0.0 | Liquid | 0.0 | 0.00 | 0.0010 | 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 0.77 0.27 0.09 0.04 0.01 0.00 0.00 0.00 0.00 0.00 0.00 1.18 1.53 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: 0.77

Total IPCC and non IPCC N2O 2.98
 Kind of source Current crops
 Total anthropogenic 2.98
 Total including natural 4.16