

2014 ENVIRONMENTAL DATA UPDATE

At Monsanto, sustainability reporting is an opportunity to offer more complete information on our company and its values, and we're committed to increasing our performance disclosures throughout our business. As we evolve our sustainability and reporting strategies, we plan to establish a much-expanded baseline for our operational footprint data regarding energy, water, waste, procurement and logistics. This sustainability update provides environmental data for calendar year 2013, including energy, water, and waste at Monsanto-owned facilities (bricks and mortar) and Monsanto-owned land. For fiscal year 2014, we will report energy, water, waste, logistics and procurement at Monsanto-owned facilities (bricks and mortar), Monsanto-owned land, and Monsanto contracted land and leased facilities.

	CROP PROTECTION		SEEDS & TRAITS		COMPANY TOTAL	
	2013	2012	2013	2012	2013	2012
GRI EN3						
DIRECT ENERGY CONSUMPTION (1000 GJ)						
Natural Gas and Other Gaseous Fuels	5,050	5,020	2,830	2,140	7,880	7,160
Oil (Including Diesel)	140	155	730	596	870	751
Coal, Coke and Other Solid Fuels	1,260	1,400	0	0	1,260	1,400
Waste Fuel	2,220	2,290	0	0	2,220	2,290
Total	8,670	8,870	3,560	2,740	12,200	11,600
BIO MASS FUELS USED IN DIRECT ENERGY GENERATION	195	207	764	950	960	1,160
BIO MASS FUELS SHIPPED OFF-SITE FOR ENERGY GENERATION	1	0	2,180	67	2,180	67
GRI EN3						
ELECTRICITY/HEAT ENERGY CONSUMPTION (1000 GJ)						
INDIRECT SOURCES:						
Purchased Electricity	6,800	6,640	1,660	1,460	8,460	8,100
Imported Steam	1,640	1,350	0	0	1,640	1,350
Total	8,440	7,990	1,660	1,460	10,100	9,450
CONSUMED PRIMARY SOURCES IN ELECTRICITY GENERATION (PERCENT OF TOTAL INDIRECT ENERGY)						
Hydro, Biomass, Geothermal, Nuclear, Solar, Wind	73%	72%	36%	36%	62%	64%
Natural Gas and Other Gaseous Fuels	16%	16%	26%	18%	19%	17%
Coal, Coke, and Other Solid Fuels	10%	10%	32%	39%	16%	17%
Oil (Including Diesel)	1%	1%	6%	6%	2%	2%
GRI EN3						
SUMMARY (1000 GJ)						
Total Energy Consumption – Direct and Indirect	17,100	16,900	5,220	4,200	22,300	21,100

Note for Table EN03: Data for biomass fuels is reported in the above table. By definition, GRI EN03 does not include combustion of biomass fuels because they are a renewable resource. We are providing this data to be transparent and highlight our efforts to generate and utilize renewable fuel sources.

Units and Substances Key: GJ = gigajoules

2014 ENVIRONMENTAL DATA UPDATE, CONT.

	CROP PROTECTION		SEEDS & TRAITS		COMPANY TOTAL	
	2013	2012	2013	2012	2013	2012
GRI EN8						
FRESH WATER WITHDRAWAL (ML-1000 m³)						
Surface Water	2,630	2,810	5,460	718	8,090	3,530
Ground Water	16,100	14,600	4,630	1,750	20,700	16,300
Municipal Water	1,530	1,590	5,530	865	7,060	2,460
Collected Rainwater	119	74	253	128	372	202
Purchased Wastewater for Reuse (R1)	0	0	213	15.5	213	15.5
Purchased-bottled or lab Water	0	0.3	3	1.5	3	1.8
Total	20,300	19,100	16,100	3,470	36,400	22,500
GRI EN10						
WATER REUSE AND RECYCLE (ML-1000 m³)						
Volume of condensate / cooling tower water recycled/reused	340,000	344,000	31,800	32,100	371,000	376,000
Volume of on-site process waste water recycled/reused	264	270	76	36	340	306
Total	340,000	344,000	31,900	32,100	372,000	376,000
GRI EN15						
TOTAL DIRECT GHG EMISSIONS SOURCE (1000 MT)						
Direct GHG Emissions (CO ₂ -eq)	1,240	1,250	210	161	1,450	1,410
GHG EMISSIONS FROM BIOMASS FUELS						
CO ₂ eq from Biomass Used (consumed) On-site	23	25	82	102	106	127
CO ₂ eq from Biomass Sold for Off-site Energy generation	0	0	239	7	240	7
GRI EN16						
TOTAL INDIRECT GHG EMISSIONS SOURCE (1000 MT)						
Indirect GHG Emissions (CO ₂ -eq)	316	319	248	220	565	539
GRI EN15 GRI EN16						
TOTAL DIRECT & INDIRECT GHG EMISSIONS SOURCE (1000 MT)						
Total Energy Consumption – Direct and Indirect	1,550	1,570	458	381	2,010	1,950

Note for Table EN15: While GRI EN15 reporting does not include GHG emissions from combustion of biomass fuels, data for GHG emissions associated with biomass fuel generation and use is reported in the above table. We are providing this data to be transparent regarding our GHG emissions and to highlight our efforts to generate and utilize renewable fuel sources.

Units and Substances Key: mt = metric tons | m³ = cubic meters | CO₂ = carbon dioxide

2014 ENVIRONMENTAL DATA UPDATE, CONT.

	CROP PROTECTION		SEEDS & TRAITS		COMPANY TOTAL	
	2013	2012	2013	2012	2013	2012
GRI EN21						
NO_x, SO_x & OTHER EMISSIONS (MT—METRIC TON)						
Sulfur Oxide Emissions, combustion and process	1,670	—	40	—	1,710	—
Nitrous Oxide Emissions, combustion and process	3,190	—	581	—	3,770	—
Volatile Organic Compound Emissions	78	—	0	—	78	—

*Data was not reported in 2012.

GRI EN22

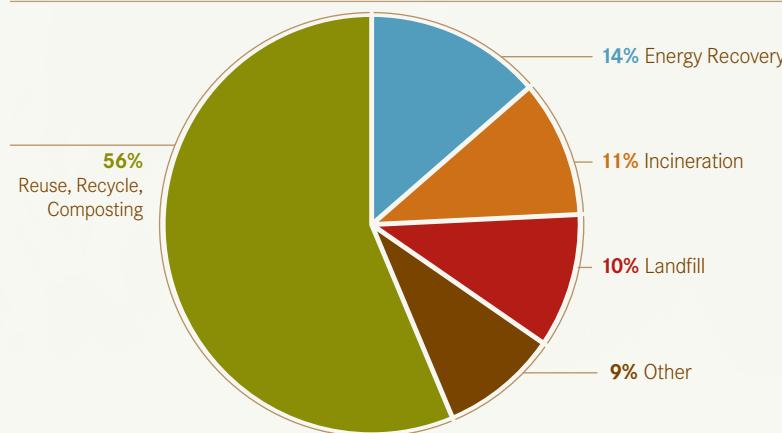
PROCESS WASTE WATER DISCHARGED (ML—1000 M³)*

Discharged to Off-site Treatment (eg. POTW)	811	790	378	431	1,190	1,220
Permitted Discharges to the Environment—Subsurface (eg. deepwell/leachfield)	1,890	1,830	49	35	1,940	1,870
Permitted Discharges to the Environment – Surface Water (eg. river)	16,300	16,200	169	36.6	16,500	16,200
Total	19,000	18,800	596	503	19,600	19,300
PROCESS WASTE WATER QUALITY DATA FOR DIRECT SURFACE WATER DISCHARGES (MT)						
BOD	41.9	45.3	0	0	41.9	45.3
Nitrate (as N)	35.1	25.7	0	0	35.1	25.7
Phosphates (as PO ₄)	187	209	0	0	187	209
Total Suspended Solids (TSS)	52.2	71.2	0	0	52.2	71.2

*Process waste water only, does not include Domestic Sewage per GRI Guidelines

GRI EN23 GRI EN25

Waste Shipped Offsite or Composted



The total waste in shipped off-site or composted 2013 was 174,000 metric tons. Approximately seven percent of the waste is classified as hazardous with the remaining 93 percent being non-hazardous. In addition, no forms of waste were exported or imported across country borders.

Units and Substances Key:

mt = metric tons | m³ = cubic meters | CO₂ = carbon dioxide | NO_x = nitrous oxide | PO₄ = phosphate
 SO_x = sulfur oxide | VOC = volatile organic compound

2014 ENVIRONMENTAL DATA UPDATE, CONT.

GRI EN24

ACCIDENTAL, EPISODIC SPILLS AND RELEASES

In 2013, the following accidental, episodic spills and releases from our facilities were significant enough to be reported to one or more governmental agencies. In cases of material spilled on the ground or in a wetland, the spilled material was promptly cleaned up. In all cases, root causes of the releases were identified and corrected, and there was no adverse impact to human health or the environment.

- In June 2013, an estimated 4,000 gallons of neutralized wastewater was released to the ground at the Bergschenhoek, Netherlands facility.
- In December 2013, three contractors were exposed when 2.2 lbs of chlorine gas was released during maintenance activities at the Luling, Louisiana facility. All three were taken to the hospital, treated and released.

GRI EN29

FINES

In 2013, Monsanto paid no significant penalties for non-compliance with environmental laws and regulations. In reporting for GRI metric EN29, we are informed by United States Security and Exchange Commission guidance that environmental proceedings to which a governmental authority is a party or known to be contemplated by governmental authorities and involving monetary sanctions greater than \$100,000, be reported to the public.

* Reported data in the preceding tables and graphs is rounded to three significant digits or, for small values, presented as no less than one tenth the indicator reporting unit. This approach enhances data usability while providing sufficient detail without becoming numerically cumbersome.

Units and Substances Key:

mt = metric tons | m³ = cubic meters | CO₂ = carbon dioxide | NO_x = nitrous oxide | PO₄ = phosphate
SO_x = sulfur oxide | VOC = volatile organic compound