Variables Used in the Emissions Estimation Equations

Values last updated on Monday, November 19, 2007

IPCC category =3A2ai — Livestock - Manure Management - Cattle - Dairy Cows

Activity = Livestock population - Dairy cows

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Dairy cows	1990	1,114,176 head	Wirth, 2007
Livestock population - Dairy cows	1991	1,140,445 head	Wirth, 2007
Livestock population - Dairy cows	1992	1,158,319 head	Wirth, 2007
Livestock population - Dairy cows	1993	1,202,603 head	Wirth, 2007
Livestock population - Dairy cows	1994	1,229,547 head	Wirth, 2007
Livestock population - Dairy cows	1995	1,271,219 head	Wirth, 2007
Livestock population - Dairy cows	1996	1,318,606 head	Wirth, 2007
Livestock population - Dairy cows	1997	1,378,674 head	Wirth, 2007
Livestock population - Dairy cows	1998	1,400,076 head	Wirth, 2007
Livestock population - Dairy cows	1999	1,441,735 head	Wirth, 2007
Livestock population - Dairy cows	2000	1,495,452 head	Wirth, 2007
Livestock population - Dairy cows	2001	1,553,902 head	Wirth, 2007
Livestock population - Dairy cows	2002	1,623,950 head	Wirth, 2007
Livestock population - Dairy cows	2003	1,666,191 head	Wirth, 2007
Livestock population - Dairy cows	2004	1,700,993 head	Wirth, 2007
Maximum methane production capacity	1990	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	2.400E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	2.400E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.44 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.44 g / kg / day	USEPA, 2007f

Proportion of livestock in managed system	1990	0.864	Wirth, 2007
Proportion of livestock in managed system	1991	0.864	Wirth, 2007
Proportion of livestock in managed system	1992	0.864	Wirth, 2007
Proportion of livestock in managed system	1993	0.867	Wirth, 2007
Proportion of livestock in managed system	1994	0.869	Wirth, 2007
Proportion of livestock in managed system	1995	0.872	Wirth, 2007
Proportion of livestock in managed system	1996	0.875	Wirth, 2007
Proportion of livestock in managed system	1997	0.878	Wirth, 2007
Proportion of livestock in managed system	1998	0.879	Wirth, 2007
Proportion of livestock in managed system	1999	0.88	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.882	Wirth, 2007
Proportion of livestock in managed system	2002	0.883	Wirth, 2007
Proportion of livestock in managed system	2003	0.883	Wirth, 2007
Proportion of livestock in managed system	2004	0.883	Wirth, 2007
State weighted methane conversion factor	1990	0.488	Wirth, 2007
State weighted methane conversion factor	1991	0.491	Wirth, 2007
State weighted methane conversion factor	1992	0.49	Wirth, 2007
State weighted methane conversion factor	1993	0.483	Wirth, 2007
State weighted methane conversion factor	1994	0.489	Wirth, 2007
State weighted methane conversion factor	1995	0.508	Wirth, 2007
State weighted methane conversion factor	1996	0.5	Wirth, 2007
State weighted methane conversion factor	1997	0.506	Wirth, 2007
State weighted methane conversion factor	1998	0.496	Wirth, 2007
State weighted methane conversion factor	1999	0.505	Wirth, 2007
State weighted methane conversion factor	2000	0.498	Wirth, 2007
State weighted methane conversion factor	2001	0.516	Wirth, 2007
State weighted methane conversion factor	2002	0.507	Wirth, 2007
State weighted methane conversion factor	2003	0.52	Wirth, 2007
State weighted methane conversion factor	2004	0.504	Wirth, 2007
State weighted N as N2O emission factor	1990	1.841E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.841E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.841E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.819E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.797E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.775E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.754E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.732E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.726E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.720E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.714E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.708E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.702E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.702E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.702E-03 g / g	Wirth, 2007
Typical animal mass	1990	604 kg / head	USEPA, 2007f
Typical animal mass	1991	604 kg / head	USEPA, 2007f
Typical animal mass	1992	604 kg / head	USEPA, 2007f
Typical animal mass	1993	604 kg / head	USEPA, 2007f
Typical animal mass	1994	604 kg / head	USEPA, 2007f
Typical animal mass	1995	604 kg / head	USEPA, 2007f
Typical animal mass	1996	604 kg / head	USEPA, 2007f
Typical animal mass	1997	604 kg / head	USEPA, 2007f
Typical animal mass	1998	604 kg / head	USEPA, 2007f
Typical animal mass	1999	604 kg / head	USEPA, 2007f
Typical animal mass	2000	604 kg / head	USEPA, 2007f

Typical animal mass	2001	604 kg / head	USEPA, 2007f
Typical animal mass	2002	604 kg / head	USEPA, 2007f
Typical animal mass	2003	604 kg / head	USEPA, 2007f
Typical animal mass	2004	604 kg / head	USEPA, 2007f
Volatile solids production rate	1990	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	9.43 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	9.85 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	9.65 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	8.83 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	9.02 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	8.91 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	9.3 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	9.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	9.33 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	9.44 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	9.35 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	9.4 g / kg / day	Wirth, 2007

Activity = Livestock population - Dairy heifers

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Dairy heifers	1990	520,556 head	Wirth, 2007
Livestock population - Dairy heifers	1991	505,407 head	Wirth, 2007
Livestock population - Dairy heifers	1992	552,891 head	Wirth, 2007
Livestock population - Dairy heifers	1993	548,186 head	Wirth, 2007
Livestock population - Dairy heifers	1994	600,793 head	Wirth, 2007
Livestock population - Dairy heifers	1995	613,086 head	Wirth, 2007
Livestock population - Dairy heifers	1996	618,988 head	Wirth, 2007
Livestock population - Dairy heifers	1997	622,726 head	Wirth, 2007
Livestock population - Dairy heifers	1998	637,582 head	Wirth, 2007
Livestock population - Dairy heifers	1999	687,369 head	Wirth, 2007
Livestock population - Dairy heifers	2000	693,017 head	Wirth, 2007
Livestock population - Dairy heifers	2001	707,758 head	Wirth, 2007
Livestock population - Dairy heifers	2002	736,312 head	Wirth, 2007
Livestock population - Dairy heifers	2003	740,657 head	Wirth, 2007
Livestock population - Dairy heifers	2004	691,866 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.31 g / kg / day	USEPA, 2007f

Nitrogen Excretion Rate	1994	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.31 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.864	Wirth, 2007
Proportion of livestock in managed system	1991	0.864	Wirth, 2007
Proportion of livestock in managed system	1992	0.864	Wirth, 2007
Proportion of livestock in managed system	1993	0.867	Wirth, 2007
Proportion of livestock in managed system	1994	0.869	Wirth, 2007
Proportion of livestock in managed system	1995	0.872	Wirth, 2007
Proportion of livestock in managed system	1996	0.875	Wirth, 2007
Proportion of livestock in managed system	1997	0.878	Wirth, 2007
Proportion of livestock in managed system	1998	0.879	Wirth, 2007
Proportion of livestock in managed system	1999	0.88	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.882	Wirth, 2007
Proportion of livestock in managed system	2002	0.883	Wirth, 2007
Proportion of livestock in managed system	2003	0.883	Wirth, 2007
Proportion of livestock in managed system	2004	0.883	Wirth, 2007
State weighted methane conversion factor	1990	0.0184	Wirth, 2007
State weighted methane conversion factor	1991	0.0183	Wirth, 2007
State weighted methane conversion factor	1992	0.0186	Wirth, 2007
State weighted methane conversion factor	1993	0.0183	Wirth, 2007
State weighted methane conversion factor	1994	0.0184	Wirth, 2007
State weighted methane conversion factor	1995	0.0184	Wirth, 2007
State weighted methane conversion factor	1996	0.0186	Wirth, 2007
State weighted methane conversion factor	1997	0.0185	Wirth, 2007
State weighted methane conversion factor	1998	0.0182	Wirth, 2007
State weighted methane conversion factor	1999	0.0182	Wirth, 2007
State weighted methane conversion factor	2000	0.0184	Wirth, 2007
State weighted methane conversion factor	2001	0.0186	Wirth, 2007
State weighted methane conversion factor	2002	0.0184	Wirth, 2007
State weighted methane conversion factor	2003	0.0186	Wirth, 2007
State weighted methane conversion factor	2004	0.0184	Wirth, 2007
State weighted N as N2O emission factor	1990	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0.0201 g / g	Wirth, 2007

Typical animal mass	1990	476 kg / head	USEPA, 2007f
Typical animal mass	1991	476 kg / head	USEPA, 2007f
Typical animal mass	1992	476 kg / head	USEPA, 2007f
Typical animal mass	1993	476 kg / head	USEPA, 2007f
Typical animal mass	1994	476 kg / head	USEPA, 2007f
Typical animal mass	1995	476 kg / head	USEPA, 2007f
Typical animal mass	1996	476 kg / head	USEPA, 2007f
Typical animal mass	1997	476 kg / head	USEPA, 2007f
Typical animal mass	1998	476 kg / head	USEPA, 2007f
Typical animal mass	1999	476 kg / head	USEPA, 2007f
Typical animal mass	2000	476 kg / head	USEPA, 2007f
Typical animal mass	2001	476 kg / head	USEPA, 2007f
Typical animal mass	2002	476 kg / head	USEPA, 2007f
Typical animal mass	2003	476 kg / head	USEPA, 2007f
Typical animal mass	2004	476 kg / head	USEPA, 2007f
Volatile solids production rate	1990	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	6.82 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	6.81 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	6.81 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	6.81 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	6.81 g / kg / day	Wirth, 2007

IPCC category =3A2aii — Livestock - Manure Management - Cattle - Other Cattle

Activity = Livestock population - Feedlot - heifers 500+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Feedlot - heifers 500+ lbs	1990	90,433 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1991	89,805 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1992	81,576 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1993	89,896 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1994	66,621 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1995	75,443 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1996	64,922 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1997	67,884 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1998	72,288 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	1999	80,956 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	2000	79,741 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	2001	88,692 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	2002	92,033 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	2003	98,058 head	Wirth, 2007
Livestock population - Feedlot - heifers 500+ lbs	2004	94,897 head	Wirth, 2007
Maximum methane production capacity	1990	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.300E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	1995	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.300E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.3 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	1	Wirth, 2007
Proportion of livestock in managed system	1991	1	Wirth, 2007
Proportion of livestock in managed system	1992	1	Wirth, 2007
Proportion of livestock in managed system	1993	1	Wirth, 2007
Proportion of livestock in managed system	1994	1	Wirth, 2007
Proportion of livestock in managed system	1995	1	Wirth, 2007
Proportion of livestock in managed system	1996	1	Wirth, 2007
Proportion of livestock in managed system	1997	1	Wirth, 2007
Proportion of livestock in managed system	1998	1	Wirth, 2007
Proportion of livestock in managed system	1999	1	Wirth, 2007
Proportion of livestock in managed system	2000	1	Wirth, 2007
Proportion of livestock in managed system	2001	1	Wirth, 2007
Proportion of livestock in managed system	2002	1	Wirth, 2007
Proportion of livestock in managed system	2003	1	Wirth, 2007
Proportion of livestock in managed system	2004	1	Wirth, 2007
State weighted methane conversion factor	1990	0.0199	Wirth, 2007
State weighted methane conversion factor	1991	0.0197	Wirth, 2007
State weighted methane conversion factor	1992	0.0199	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.0198	Wirth, 2007
State weighted methane conversion factor	1995	0.0198	Wirth, 2007
State weighted methane conversion factor	1996	0.0199	Wirth, 2007
State weighted methane conversion factor	1997	0.0197	Wirth, 2007
State weighted methane conversion factor	1998	0.0193	Wirth, 2007
State weighted methane conversion factor	1999	0.0194	Wirth, 2007
State weighted methane conversion factor	2000	0.0197	Wirth, 2007
State weighted methane conversion factor	2001	0.02	Wirth, 2007
State weighted methane conversion factor	2002	0.02	Wirth, 2007
State weighted methane conversion factor	2003	0.0202	Wirth, 2007
State weighted methane conversion factor	2004	0.02	Wirth, 2007

State weighted N as N2O emission factor	1990	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0.0201 g / g	Wirth, 2007
Typical animal mass	1990	420 kg / head	USEPA, 2007f
Typical animal mass	1991	420 kg / head	USEPA, 2007f
Typical animal mass	1992	420 kg / head	USEPA, 2007f
Typical animal mass	1993	420 kg / head	USEPA, 2007f
Typical animal mass	1994	420 kg / head	USEPA, 2007f
Typical animal mass	1995	420 kg / head	USEPA, 2007f
Typical animal mass	1996	420 kg / head	USEPA, 2007f
Typical animal mass	1997	420 kg / head	USEPA, 2007f
Typical animal mass	1998	420 kg / head	USEPA, 2007f
Typical animal mass	1999	420 kg / head	USEPA, 2007f
Typical animal mass	2000	420 kg / head	USEPA, 2007f
Typical animal mass	2001	420 kg / head	USEPA, 2007f
Typical animal mass	2002	420 kg / head	USEPA, 2007f
Typical animal mass	2003	420 kg / head	USEPA, 2007f
Typical animal mass	2004	420 kg / head	USEPA, 2007f
Volatile solids production rate	1990	6.01 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	5.9 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	5.38 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	5.01 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	4.61 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	4.24 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	4.11 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	3.91 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	3.88 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	3.89 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	3.95 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	3.94 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	3.87 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	3.96 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	3.95 g / kg / day	Wirth, 2007

Activity = Livestock population - Feedlot - steers 500+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Feedlot - steers 500+ lbs	1990	371,428 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1991	305,072 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1992	275,028 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1993	321,416 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1994	272,042 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1995	304,912 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1996	242,429 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1997	274,669 head	Wirth, 2007

Livestock population - Feedlot - steers 500+ lbs	1998	289,382 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	1999	292,191 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	2000	310,591 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	2001	342,767 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	2002	361,486 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	2003	370,548 head	Wirth, 2007
Livestock population - Feedlot - steers 500+ lbs	2004	377,942 head	Wirth, 2007
Maximum methane production capacity	1990	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.300E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.3 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	1	Wirth, 2007
Proportion of livestock in managed system	1991	1	Wirth, 2007
Proportion of livestock in managed system	1992	1	Wirth, 2007
Proportion of livestock in managed system	1993	1	Wirth, 2007
Proportion of livestock in managed system	1994	1	Wirth, 2007
Proportion of livestock in managed system	1995	1	Wirth, 2007
Proportion of livestock in managed system	1996	1	Wirth, 2007
Proportion of livestock in managed system	1997	1	Wirth, 2007
Proportion of livestock in managed system	1998	1	Wirth, 2007
Proportion of livestock in managed system	1999	1	Wirth, 2007
Proportion of livestock in managed system	2000	1	Wirth, 2007
Proportion of livestock in managed system	2001	1	Wirth, 2007
Proportion of livestock in managed system	2002	1	Wirth, 2007
Proportion of livestock in managed system	2003	1	Wirth, 2007
Proportion of livestock in managed system	2004	1	Wirth, 2007
State weighted methane conversion factor	1990	0.0199	Wirth, 2007
State weighted methane conversion factor	1991	0.0197	Wirth, 2007
State weighted methane conversion factor	1992	0.0199	Wirth, 2007

State weighted methane conversion factor	1993	0.0196	Wirth, 2007
State weighted methane conversion factor	1994	0.0198	Wirth, 2007
State weighted methane conversion factor	1995	0.0198	Wirth, 2007
State weighted methane conversion factor	1996	0.0199	Wirth, 2007
State weighted methane conversion factor	1997	0.0197	Wirth, 2007
State weighted methane conversion factor	1998	0.0193	Wirth, 2007
State weighted methane conversion factor	1999	0.0194	Wirth, 2007
State weighted methane conversion factor	2000	0.0197	Wirth, 2007
State weighted methane conversion factor	2001	0.02	Wirth, 2007
State weighted methane conversion factor	2002	0.02	Wirth, 2007
State weighted methane conversion factor	2003	0.0202	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0.0201 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0.0201 g / g	Wirth, 2007
Typical animal mass	1990	420 kg / head	USEPA, 2007f
Typical animal mass	1991	420 kg / head	USEPA, 2007f
Typical animal mass	1992	420 kg / head	USEPA, 2007f
Typical animal mass	1993	420 kg / head	USEPA, 2007f
Typical animal mass	1994	420 kg / head	USEPA, 2007f
Typical animal mass	1995	420 kg / head	USEPA, 2007f
Typical animal mass	1996	420 kg / head	USEPA, 2007f
Typical animal mass	1997	420 kg / head	USEPA, 2007f
Typical animal mass	1998	420 kg / head	USEPA, 2007f
Typical animal mass	1999	420 kg / head	USEPA, 2007f
Typical animal mass	2000	420 kg / head	USEPA, 2007f
Typical animal mass	2001	420 kg / head	USEPA, 2007f
Typical animal mass	2002	420 kg / head	USEPA, 2007f
Typical animal mass	2003	420 kg / head	USEPA, 2007f
Typical animal mass	2004	420 kg / head	USEPA, 2007f
Volatile solids production rate	1990	5.66 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	5.54 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	5.05 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	4.77 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	4.43 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	4.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	3.96 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	3.78 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	3.72 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	3.75 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	3.84 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	3.82 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	3.72 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	3.8 g / kg / day	Wirth, 2007

Volatile solids production rate	2004	3.83 g / kg / day	Wirth, 2007

Activity = Livestock population - Not on feed - beef cows

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Not on feed - beef cows	1990	961,552 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1991	912,180 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1992	891,907 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1993	859,324 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1994	872,391 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1995	860,987 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1996	844,534 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1997	824,071 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1998	826,231 head	Wirth, 2007
Livestock population - Not on feed - beef cows	1999	814,795 head	Wirth, 2007
Livestock population - Not on feed - beef cows	2000	794,412 head	Wirth, 2007
Livestock population - Not on feed - beef cows	2001	785,860 head	Wirth, 2007
Livestock population - Not on feed - beef cows	2002	767,068 head	Wirth, 2007
Livestock population - Not on feed - beef cows	2003	746,918 head	Wirth, 2007
Livestock population - Not on feed - beef cows	2004	725,902 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.31 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007

Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	533 kg / head	USEPA, 2007f
Typical animal mass	1991	533 kg / head	USEPA, 2007f
Typical animal mass	1992	533 kg / head	USEPA, 2007f
Typical animal mass	1993	533 kg / head	USEPA, 2007f
Typical animal mass	1994	533 kg / head	USEPA, 2007f
Typical animal mass	1995	533 kg / head	USEPA, 2007f
Typical animal mass	1996	533 kg / head	USEPA, 2007f
Typical animal mass	1997	533 kg / head	USEPA, 2007f
Typical animal mass	1998	533 kg / head	USEPA, 2007f
Typical animal mass	1999	533 kg / head	USEPA, 2007f
Typical animal mass	2000	533 kg / head	USEPA, 2007f
Typical animal mass	2001	533 kg / head	USEPA, 2007f
Typical animal mass	2002	533 kg / head	USEPA, 2007f
Typical animal mass	2003	533 kg / head	USEPA, 2007f
Typical animal mass	2004	533 kg / head	USEPA, 2007f
Volatile solids production rate	1990	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	6.57 g / kg / day	Wirth, 2007

Volatile solids production rate	1992	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	6.57 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	6.57 g / kg / day	Wirth, 2007

Activity = Livestock population - Not on feed - bulls 500+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Not on feed - bulls 500+ lbs	1990	70,643 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1991	70,072 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1992	69,390 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1993	68,808 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1994	74,805 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1995	75,239 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1996	70,236 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1997	69,249 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1998	64,005 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	1999	68,756 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	2000	67,053 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	2001	67,319 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	2002	62,913 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	2003	62,862 head	Wirth, 2007
Livestock population - Not on feed - bulls 500+ lbs	2004	62,703 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.31 g / kg / day	USEPA, 2007f

Nitrogen Excretion Rate	2000	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.31 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	750 kg / head	USEPA, 2007f
Typical animal mass	1991	750 kg / head	USEPA, 2007f
Typical animal mass	1992	750 kg / head	USEPA, 2007f
Typical animal mass	1993	750 kg / head	USEPA, 2007f
Typical animal mass	1994	750 kg / head	USEPA, 2007f

Typical animal mass	1995	750 kg / head	USEPA, 2007f
Typical animal mass	1996	750 kg / head	USEPA, 2007f
Typical animal mass	1997	750 kg / head	USEPA, 2007f
Typical animal mass	1998	750 kg / head	USEPA, 2007f
Typical animal mass	1999	750 kg / head	USEPA, 2007f
Typical animal mass	2000	750 kg / head	USEPA, 2007f
Typical animal mass	2001	750 kg / head	USEPA, 2007f
Typical animal mass	2002	750 kg / head	USEPA, 2007f
Typical animal mass	2003	750 kg / head	USEPA, 2007f
Typical animal mass	2004	750 kg / head	USEPA, 2007f
Volatile solids production rate	1990	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	6.04 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	6.04 g / kg / day	Wirth, 2007

Activity = Livestock population - Not on feed - calves <500 lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Not on feed - calves <500 lbs	1990	1,226,739 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1991	1,337,124 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1992	1,210,105 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1993	1,242,674 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1994	1,348,115 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1995	1,331,201 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1996	1,334,924 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1997	1,339,392 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1998	1,365,452 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	1999	1,464,912 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	2000	1,467,846 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	2001	1,486,550 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	2002	1,490,476 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	2003	1,533,064 head	Wirth, 2007
Livestock population - Not on feed - calves <500 lbs	2004	1,519,116 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.3 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007

State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	118 kg / head	USEPA, 2007f
Typical animal mass	1991	118 kg / head	USEPA, 2007f
Typical animal mass	1992	118 kg / head	USEPA, 2007f
Typical animal mass	1993	118 kg / head	USEPA, 2007f
Typical animal mass	1994	118 kg / head	USEPA, 2007f
Typical animal mass	1995	118 kg / head	USEPA, 2007f
Typical animal mass	1996	118 kg / head	USEPA, 2007f
Typical animal mass	1997	118 kg / head	USEPA, 2007f
Typical animal mass	1998	118 kg / head	USEPA, 2007f
Typical animal mass	1999	118 kg / head	USEPA, 2007f
Typical animal mass	2000	118 kg / head	USEPA, 2007f
Typical animal mass	2001	118 kg / head	USEPA, 2007f
Typical animal mass	2002	118 kg / head	USEPA, 2007f
Typical animal mass	2003	118 kg / head	USEPA, 2007f
Typical animal mass	2004	118 kg / head	USEPA, 2007f
Volatile solids production rate	1990	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	6.41 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	6.41 g / kg / day	Wirth, 2007

Activity = Livestock population - Not on feed - heifers 500+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Not on feed - heifers 500+ lbs	1990	234,712 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1991	236,437 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1992	240,501 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1993	221,711 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1994	237,748 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1995	228,631 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1996	240,012 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1997	226,162 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1998	212,092 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	1999	225,076 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	2000	212,029 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	2001	192,728 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	2002	182,972 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	2003	171,287 head	Wirth, 2007
Livestock population - Not on feed - heifers 500+ lbs	2004	172,410 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.31 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007

State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	420 kg / head	USEPA, 2007f
Typical animal mass	1991	420 kg / head	USEPA, 2007f
Typical animal mass	1992	420 kg / head	USEPA, 2007f
Typical animal mass	1993	420 kg / head	USEPA, 2007f
Typical animal mass	1994	420 kg / head	USEPA, 2007f
Typical animal mass	1995	420 kg / head	USEPA, 2007f
Typical animal mass	1996	420 kg / head	USEPA, 2007f
Typical animal mass	1997	420 kg / head	USEPA, 2007f
Typical animal mass	1998	420 kg / head	USEPA, 2007f
Typical animal mass	1999	420 kg / head	USEPA, 2007f
Typical animal mass	2000	420 kg / head	USEPA, 2007f
Typical animal mass	2001	420 kg / head	USEPA, 2007f
Typical animal mass	2002	420 kg / head	USEPA, 2007f
Typical animal mass	2003	420 kg / head	USEPA, 2007f
Typical animal mass	2004	420 kg / head	USEPA, 2007f
Volatile solids production rate	1990	7 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	7.01 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	6.96 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	6.95 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	6.95 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	6.93 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	6.93 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	6.95 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	6.97 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	6.98 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	7.03 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	7.03 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	7.06 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	7.06 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	7.07 g / kg / day	Wirth, 2007

Activity = Livestock population - Not on feed - steers 500+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Not on feed - steers 500+ lbs	1990	344,439 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1991	288,393 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1992	323,834 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1993	308,249 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1994	360,982 head	Wirth, 2007

Livestock population - Not on feed - steers 500+ lbs	1995	334,075 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1996	367,285 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1997	345,411 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1998	307,045 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	1999	323,775 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	2000	302,282 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	2001	251,617 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	2002	234,642 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	2003	200,723 head	Wirth, 2007
Livestock population - Not on feed - steers 500+ lbs	2004	221,219 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.31 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.31 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007

State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	318 kg / head	USEPA, 2007f
Typical animal mass	1991	318 kg / head	USEPA, 2007f
Typical animal mass	1992	318 kg / head	USEPA, 2007f
Typical animal mass	1993	318 kg / head	USEPA, 2007f
Typical animal mass	1994	318 kg / head	USEPA, 2007f
Typical animal mass	1995	318 kg / head	USEPA, 2007f
Typical animal mass	1996	318 kg / head	USEPA, 2007f
Typical animal mass	1997	318 kg / head	USEPA, 2007f
Typical animal mass	1998	318 kg / head	USEPA, 2007f
Typical animal mass	1999	318 kg / head	USEPA, 2007f
Typical animal mass	2000	318 kg / head	USEPA, 2007f
Typical animal mass	2001	318 kg / head	USEPA, 2007f
Typical animal mass	2002	318 kg / head	USEPA, 2007f
Typical animal mass	2003	318 kg / head	USEPA, 2007f
Typical animal mass	2004	318 kg / head	USEPA, 2007f
Volatile solids production rate	1990	7.36 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	7.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	7.27 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	7.25 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	7.28 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	7.19 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	7.16 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	7.25 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	7.31 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	7.38 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	7.5 g / kg / day	Wirth, 2007

Volatile solids production rate	2001	7.44 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	7.54 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	7.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	7.5 g / kg / day	Wirth, 2007

IPCC category =3A2c — Livestock - Manure Management - Sheep

Activity = Livestock population - Sheep

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Sheep	1990	1,000,000 head	Wirth, 2007
Livestock population - Sheep	1991	1,015,000 head	Wirth, 2007
Livestock population - Sheep	1992	995,000 head	Wirth, 2007
Livestock population - Sheep	1993	895,000 head	Wirth, 2007
Livestock population - Sheep	1994	1,080,000 head	Wirth, 2007
Livestock population - Sheep	1995	1,020,000 head	Wirth, 2007
Livestock population - Sheep	1996	920,000 head	Wirth, 2007
Livestock population - Sheep	1997	880,000 head	Wirth, 2007
Livestock population - Sheep	1998	800,000 head	Wirth, 2007
Livestock population - Sheep	1999	830,000 head	Wirth, 2007
Livestock population - Sheep	2000	810,000 head	Wirth, 2007
Livestock population - Sheep	2001	805,000 head	Wirth, 2007
Livestock population - Sheep	2002	755,000 head	Wirth, 2007
Livestock population - Sheep	2003	730,000 head	Wirth, 2007
Livestock population - Sheep	2004	680,000 head	Wirth, 2007
Maximum methane production capacity	1990	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.413E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.413E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.42 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.02	Wirth, 2007

Proportion of livestock in managed system	1991	0.02	Wirth, 2007
Proportion of livestock in managed system	1992	0.02	Wirth, 2007
Proportion of livestock in managed system	1993	0.02	Wirth, 2007
Proportion of livestock in managed system	1994	0.02	Wirth, 2007
Proportion of livestock in managed system	1995	0.02	Wirth, 2007
Proportion of livestock in managed system	1996	0.02	Wirth, 2007
Proportion of livestock in managed system	1997	0.02	Wirth, 2007
Proportion of livestock in managed system	1998	0.02	Wirth, 2007
Proportion of livestock in managed system	1999	0.02	Wirth, 2007
Proportion of livestock in managed system	2000	0.02	Wirth, 2007
Proportion of livestock in managed system	2001	0.02	Wirth, 2007
Proportion of livestock in managed system	2002	0.02	Wirth, 2007
Proportion of livestock in managed system	2003	0.02	Wirth, 2007
Proportion of livestock in managed system	2004	0.02	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0.02 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0.02 g / g	Wirth, 2007
Typical animal mass	1990	68.6 kg / head	USEPA, 2007f
Typical animal mass	1991	68.6 kg / head	USEPA, 2007f
Typical animal mass	1992	68.6 kg / head	USEPA, 2007f
Typical animal mass	1993	68.6 kg / head	USEPA, 2007f
Typical animal mass	1994	68.6 kg / head	USEPA, 2007f
Typical animal mass	1995	68.6 kg / head	USEPA, 2007f
Typical animal mass	1996	68.6 kg / head	USEPA, 2007f
Typical animal mass	1997	68.6 kg / head	USEPA, 2007f
Typical animal mass	1998	68.6 kg / head	USEPA, 2007f
Typical animal mass	1999	68.6 kg / head	USEPA, 2007f
Typical animal mass	2000	68.6 kg / head	USEPA, 2007f
Typical animal mass	2001	68.6 kg / head	USEPA, 2007f

Typical animal mass	2002	68.6 kg / head	USEPA, 2007f
Typical animal mass	2003	68.6 kg / head	USEPA, 2007f
Typical animal mass	2004	68.6 kg / head	USEPA, 2007f
Volatile solids production rate	1990	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	9.2 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	9.2 g / kg / day	Wirth, 2007

IPCC category =3A2d — Livestock - Manure Management - Goats

Activity = Livestock population - Goats

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Goats	1990	33,683 head	Wirth, 2007
Livestock population - Goats	1991	33,683 head	Wirth, 2007
Livestock population - Goats	1992	33,683 head	Wirth, 2007
Livestock population - Goats	1993	37,310 head	Wirth, 2007
Livestock population - Goats	1994	40,937 head	Wirth, 2007
Livestock population - Goats	1995	44,563 head	Wirth, 2007
Livestock population - Goats	1996	48,190 head	Wirth, 2007
Livestock population - Goats	1997	51,817 head	Wirth, 2007
Livestock population - Goats	1998	62,078 head	Wirth, 2007
Livestock population - Goats	1999	72,339 head	Wirth, 2007
Livestock population - Goats	2000	82,600 head	Wirth, 2007
Livestock population - Goats	2001	92,861 head	Wirth, 2007
Livestock population - Goats	2002	103,122 head	Wirth, 2007
Livestock population - Goats	2003	103,122 head	Wirth, 2007
Livestock population - Goats	2004	103,122 head	Wirth, 2007
Maximum methane production capacity	1990	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	1.700E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	1.700E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.45 g / kg / day	USEPA, 2007f

Nitrogen Excretion Rate	1992	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.45 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.45 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007

State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	64 kg / head	USEPA, 2007f
Typical animal mass	1991	64 kg / head	USEPA, 2007f
Typical animal mass	1992	64 kg / head	USEPA, 2007f
Typical animal mass	1993	64 kg / head	USEPA, 2007f
Typical animal mass	1994	64 kg / head	USEPA, 2007f
Typical animal mass	1995	64 kg / head	USEPA, 2007f
Typical animal mass	1996	64 kg / head	USEPA, 2007f
Typical animal mass	1997	64 kg / head	USEPA, 2007f
Typical animal mass	1998	64 kg / head	USEPA, 2007f
Typical animal mass	1999	64 kg / head	USEPA, 2007f
Typical animal mass	2000	64 kg / head	USEPA, 2007f
Typical animal mass	2001	64 kg / head	USEPA, 2007f
Typical animal mass	2002	64 kg / head	USEPA, 2007f
Typical animal mass	2003	64 kg / head	USEPA, 2007f
Typical animal mass	2004	64 kg / head	USEPA, 2007f
Volatile solids production rate	1990	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	9.5 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	9.5 g / kg / day	Wirth, 2007

IPCC category =3A2f — Livestock - Manure Management - Horses

Activity = Livestock population - Horses

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Horses	1990	308,957 head	Wirth, 2007
Livestock population - Horses	1991	310,847 head	Wirth, 2007
Livestock population - Horses	1992	312,127 head	Wirth, 2007
Livestock population - Horses	1993	312,675 head	Wirth, 2007
Livestock population - Horses	1994	311,456 head	Wirth, 2007
Livestock population - Horses	1995	239,056 head	Wirth, 2007
Livestock population - Horses	1996	239,988 head	Wirth, 2007
Livestock population - Horses	1997	240,920 head	Wirth, 2007
Livestock population - Horses	1998	244,042 head	Wirth, 2007
Livestock population - Horses	1999	240,920 head	Wirth, 2007
Livestock population - Horses	2000	189,728 head	Wirth, 2007
Livestock population - Horses	2001	191,901 head	Wirth, 2007
Livestock population - Horses	2002	191,901 head	Wirth, 2007
Livestock population - Horses	2003	191,901 head	Wirth, 2007
Livestock population - Horses	2004	191,901 head	Wirth, 2007
Maximum methane production capacity	1990	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.300E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	1993	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.300E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.300E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.3 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.3 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0	Wirth, 2007
Proportion of livestock in managed system	1991	0	Wirth, 2007
Proportion of livestock in managed system	1992	0	Wirth, 2007
Proportion of livestock in managed system	1993	0	Wirth, 2007
Proportion of livestock in managed system	1994	0	Wirth, 2007
Proportion of livestock in managed system	1995	0	Wirth, 2007
Proportion of livestock in managed system	1996	0	Wirth, 2007
Proportion of livestock in managed system	1997	0	Wirth, 2007
Proportion of livestock in managed system	1998	0	Wirth, 2007
Proportion of livestock in managed system	1999	0	Wirth, 2007
Proportion of livestock in managed system	2000	0	Wirth, 2007
Proportion of livestock in managed system	2001	0	Wirth, 2007
Proportion of livestock in managed system	2002	0	Wirth, 2007
Proportion of livestock in managed system	2003	0	Wirth, 2007
Proportion of livestock in managed system	2004	0	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007

State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	0 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	0 g / g	Wirth, 2007
Typical animal mass	1990	450 kg / head	USEPA, 2007f
Typical animal mass	1991	450 kg / head	USEPA, 2007f
Typical animal mass	1992	450 kg / head	USEPA, 2007f
Typical animal mass	1993	450 kg / head	USEPA, 2007f
Typical animal mass	1994	450 kg / head	USEPA, 2007f
Typical animal mass	1995	450 kg / head	USEPA, 2007f
Typical animal mass	1996	450 kg / head	USEPA, 2007f
Typical animal mass	1997	450 kg / head	USEPA, 2007f
Typical animal mass	1998	450 kg / head	USEPA, 2007f
Typical animal mass	1999	450 kg / head	USEPA, 2007f
Typical animal mass	2000	450 kg / head	USEPA, 2007f
Typical animal mass	2001	450 kg / head	USEPA, 2007f
Typical animal mass	2002	450 kg / head	USEPA, 2007f
Typical animal mass	2003	450 kg / head	USEPA, 2007f
Typical animal mass	2004	450 kg / head	USEPA, 2007f
Volatile solids production rate	1990	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	10 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	10 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	10 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	10 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	10 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	10 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	10 g / kg / day	Wirth, 2007

IPCC category =3A2h — Livestock - Manure Management - Swine

Activity = Livestock population - Swine - breeding

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Swine - breeding	1990	28,000 head	Wirth, 2007
Livestock population - Swine - breeding	1991	29,000 head	Wirth, 2007
Livestock population - Swine - breeding	1992	37,000 head	Wirth, 2007
Livestock population - Swine - breeding	1993	33,000 head	Wirth, 2007

Livestock population - Swine - breeding	1994	32,000 head	Wirth, 2007
Livestock population - Swine - breeding	1995	31,000 head	Wirth, 2007
Livestock population - Swine - breeding	1996	27,000 head	Wirth, 2007
Livestock population - Swine - breeding	1997	27,000 head	Wirth, 2007
Livestock population - Swine - breeding	1998	27,000 head	Wirth, 2007
Livestock population - Swine - breeding	1999	25,000 head	Wirth, 2007
Livestock population - Swine - breeding	2000	20,000 head	Wirth, 2007
Livestock population - Swine - breeding	2001	20,000 head	Wirth, 2007
Livestock population - Swine - breeding	2002	22,000 head	Wirth, 2007
Livestock population - Swine - breeding	2003	20,000 head	Wirth, 2007
Livestock population - Swine - breeding	2004	20,000 head	Wirth, 2007
Maximum methane production capacity	1990	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	4.800E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.235 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.235 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.875	Wirth, 2007
Proportion of livestock in managed system	1991	0.875	Wirth, 2007
Proportion of livestock in managed system	1992	0.875	Wirth, 2007
Proportion of livestock in managed system	1993	0.881	Wirth, 2007
Proportion of livestock in managed system	1994	0.887	Wirth, 2007
Proportion of livestock in managed system	1995	0.892	Wirth, 2007
Proportion of livestock in managed system	1996	0.898	Wirth, 2007
Proportion of livestock in managed system	1997	0.904	Wirth, 2007
Proportion of livestock in managed system	1998	0.896	Wirth, 2007
Proportion of livestock in managed system	1999	0.889	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.874	Wirth, 2007
Proportion of livestock in managed system	2002	0.866	Wirth, 2007
Proportion of livestock in managed system	2003	0.866	Wirth, 2007
Proportion of livestock in managed system	2004	0.866	Wirth, 2007

State weighted methane conversion factor	1990	0.471	Wirth, 2007
State weighted methane conversion factor	1991	0.474	Wirth, 2007
State weighted methane conversion factor	1992	0.478	Wirth, 2007
State weighted methane conversion factor	1993	0.466	Wirth, 2007
State weighted methane conversion factor	1994	0.473	Wirth, 2007
State weighted methane conversion factor	1995	0.491	Wirth, 2007
State weighted methane conversion factor	1996	0.49	Wirth, 2007
State weighted methane conversion factor	1997	0.495	Wirth, 2007
State weighted methane conversion factor	1998	0.474	Wirth, 2007
State weighted methane conversion factor	1999	0.479	Wirth, 2007
State weighted methane conversion factor	2000	0.469	Wirth, 2007
State weighted methane conversion factor	2001	0.481	Wirth, 2007
State weighted methane conversion factor	2002	0.466	Wirth, 2007
State weighted methane conversion factor	2003	0.477	Wirth, 2007
State weighted methane conversion factor	2004	0.463	Wirth, 2007
State weighted N as N2O emission factor	1990	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.311E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.276E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.280E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.294E-03 g / g	Wirth, 2007
Typical animal mass	1990	198 kg / head	USEPA, 2007f
Typical animal mass	1991	198 kg / head	USEPA, 2007f
Typical animal mass	1992	198 kg / head	USEPA, 2007f
Typical animal mass	1993	198 kg / head	USEPA, 2007f
Typical animal mass	1994	198 kg / head	USEPA, 2007f
Typical animal mass	1995	198 kg / head	USEPA, 2007f
Typical animal mass	1996	198 kg / head	USEPA, 2007f
Typical animal mass	1997	198 kg / head	USEPA, 2007f
Typical animal mass	1998	198 kg / head	USEPA, 2007f
Typical animal mass	1999	198 kg / head	USEPA, 2007f
Typical animal mass	2000	198 kg / head	USEPA, 2007f
Typical animal mass	2001	198 kg / head	USEPA, 2007f
Typical animal mass	2002	198 kg / head	USEPA, 2007f
Typical animal mass	2003	198 kg / head	USEPA, 2007f
Typical animal mass	2004	198 kg / head	USEPA, 2007f
Volatile solids production rate	1990	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	2.6 g / kg / day	Wirth, 2007

Volatile solids production rate	2000	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	2.6 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	2.6 g / kg / day	Wirth, 2007

Activity = Livestock population - Swine - market <60 lbs

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Swine - market <60 lbs	1990	60,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1991	64,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1992	82,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1993	74,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1994	70,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1995	65,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1996	57,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1997	60,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1998	70,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	1999	55,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	2000	32,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	2001	35,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	2002	39,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	2003	35,000 head	Wirth, 2007
Livestock population - Swine - market <60 lbs	2004	32,000 head	Wirth, 2007
Maximum methane production capacity	1990	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	4.800E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.6 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.6 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.875	Wirth, 2007
Proportion of livestock in managed system	1991	0.875	Wirth, 2007
Proportion of livestock in managed system	1992	0.875	Wirth, 2007

Proportion of livestock in managed system	1993	0.881	Wirth, 2007
Proportion of livestock in managed system	1994	0.887	Wirth, 2007
Proportion of livestock in managed system	1995	0.892	Wirth, 2007
Proportion of livestock in managed system	1996	0.898	Wirth, 2007
Proportion of livestock in managed system	1997	0.904	Wirth, 2007
Proportion of livestock in managed system	1998	0.896	Wirth, 2007
Proportion of livestock in managed system	1999	0.889	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.874	Wirth, 2007
Proportion of livestock in managed system	2002	0.866	Wirth, 2007
Proportion of livestock in managed system	2003	0.866	Wirth, 2007
Proportion of livestock in managed system	2004	0.866	Wirth, 2007
State weighted methane conversion factor	1990	0.471	Wirth, 2007
State weighted methane conversion factor	1991	0.474	Wirth, 2007
State weighted methane conversion factor	1992	0.477	Wirth, 2007
State weighted methane conversion factor	1993	0.466	Wirth, 2007
State weighted methane conversion factor	1994	0.473	Wirth, 2007
State weighted methane conversion factor	1995	0.491	Wirth, 2007
State weighted methane conversion factor	1996	0.49	Wirth, 2007
State weighted methane conversion factor	1997	0.496	Wirth, 2007
State weighted methane conversion factor	1998	0.474	Wirth, 2007
State weighted methane conversion factor	1999	0.477	Wirth, 2007
State weighted methane conversion factor	2000	0.467	Wirth, 2007
State weighted methane conversion factor	2001	0.477	Wirth, 2007
State weighted methane conversion factor	2002	0.46	Wirth, 2007
State weighted methane conversion factor	2003	0.472	Wirth, 2007
State weighted methane conversion factor	2004	0.459	Wirth, 2007
State weighted N as N2O emission factor	1990	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.311E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.276E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.280E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.294E-03 g / g	Wirth, 2007
Typical animal mass	1990	15.9 kg / head	USEPA, 2007f
Typical animal mass	1991	15.9 kg / head	USEPA, 2007f
Typical animal mass	1992	15.9 kg / head	USEPA, 2007f
Typical animal mass	1993	15.9 kg / head	USEPA, 2007f
Typical animal mass	1994	15.9 kg / head	USEPA, 2007f
Typical animal mass	1995	15.9 kg / head	USEPA, 2007f
Typical animal mass	1996	15.9 kg / head	USEPA, 2007f
Typical animal mass	1997	15.9 kg / head	USEPA, 2007f
Typical animal mass	1998	15.9 kg / head	USEPA, 2007f
Typical animal mass	1999	15.9 kg / head	USEPA, 2007f
Typical animal mass	2000	15.9 kg / head	USEPA, 2007f
Typical animal mass	2001	15.9 kg / head	USEPA, 2007f
Typical animal mass	2002	15.9 kg / head	USEPA, 2007f
Typical animal mass	2003	15.9 kg / head	USEPA, 2007f

Typical animal mass	2004	15.9 kg / head	USEPA, 2007f
Volatile solids production rate	1990	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	8.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	8.8 g / kg / day	Wirth, 2007

Activity = Livestock population - Swine - market 120-179 lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Swine - market 120-179 lbs	1990	31,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1991	40,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1992	45,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1993	49,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1994	45,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1995	44,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1996	40,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1997	45,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1998	40,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	1999	35,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	2000	45,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	2001	11,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	2002	29,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	2003	28,000 head	Wirth, 2007
Livestock population - Swine - market 120-179 lbs	2004	26,000 head	Wirth, 2007
Maximum methane production capacity	1990	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	4.800E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.42 g / kg / day	USEPA, 2007f

Nitrogen Excretion Rate	1997	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.42 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.875	Wirth, 2007
Proportion of livestock in managed system	1991	0.875	Wirth, 2007
Proportion of livestock in managed system	1992	0.875	Wirth, 2007
Proportion of livestock in managed system	1993	0.881	Wirth, 2007
Proportion of livestock in managed system	1994	0.887	Wirth, 2007
Proportion of livestock in managed system	1995	0.892	Wirth, 2007
Proportion of livestock in managed system	1996	0.898	Wirth, 2007
Proportion of livestock in managed system	1997	0.904	Wirth, 2007
Proportion of livestock in managed system	1998	0.896	Wirth, 2007
Proportion of livestock in managed system	1999	0.889	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.874	Wirth, 2007
Proportion of livestock in managed system	2002	0.866	Wirth, 2007
Proportion of livestock in managed system	2003	0.866	Wirth, 2007
Proportion of livestock in managed system	2004	0.866	Wirth, 2007
State weighted methane conversion factor	1990	0.471	Wirth, 2007
State weighted methane conversion factor	1991	0.474	Wirth, 2007
State weighted methane conversion factor	1992	0.477	Wirth, 2007
State weighted methane conversion factor	1993	0.466	Wirth, 2007
State weighted methane conversion factor	1994	0.473	Wirth, 2007
State weighted methane conversion factor	1995	0.491	Wirth, 2007
State weighted methane conversion factor	1996	0.49	Wirth, 2007
State weighted methane conversion factor	1997	0.496	Wirth, 2007
State weighted methane conversion factor	1998	0.474	Wirth, 2007
State weighted methane conversion factor	1999	0.477	Wirth, 2007
State weighted methane conversion factor	2000	0.467	Wirth, 2007
State weighted methane conversion factor	2001	0.477	Wirth, 2007
State weighted methane conversion factor	2002	0.46	Wirth, 2007
State weighted methane conversion factor	2003	0.472	Wirth, 2007
State weighted methane conversion factor	2004	0.459	Wirth, 2007
State weighted N as N2O emission factor	1990	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.311E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.276E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.280E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.294E-03 g / g	Wirth, 2007
Typical animal mass	1990	67.8 kg / head	USEPA, 2007f
Typical animal mass	1991	67.8 kg / head	USEPA, 2007f

Typical animal mass	1992	67.8 kg / head	USEPA, 2007f
Typical animal mass	1993	67.8 kg / head	USEPA, 2007f
Typical animal mass	1994	67.8 kg / head	USEPA, 2007f
Typical animal mass	1995	67.8 kg / head	USEPA, 2007f
Typical animal mass	1996	67.8 kg / head	USEPA, 2007f
Typical animal mass	1997	67.8 kg / head	USEPA, 2007f
Typical animal mass	1998	67.8 kg / head	USEPA, 2007f
Typical animal mass	1999	67.8 kg / head	USEPA, 2007f
Typical animal mass	2000	67.8 kg / head	USEPA, 2007f
Typical animal mass	2001	67.8 kg / head	USEPA, 2007f
Typical animal mass	2002	67.8 kg / head	USEPA, 2007f
Typical animal mass	2003	67.8 kg / head	USEPA, 2007f
Typical animal mass	2004	67.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	5.4 g / kg / day	Wirth, 2007

Activity = Livestock population - Swine - market 180+ lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Swine - market 180+ lbs	1990	27,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1991	31,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1992	43,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1993	44,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1994	43,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1995	42,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1996	35,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1997	33,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1998	23,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	1999	25,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	2000	10,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	2001	19,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	2002	28,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	2003	27,000 head	Wirth, 2007
Livestock population - Swine - market 180+ lbs	2004	30,000 head	Wirth, 2007
Maximum methane production capacity	1990	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	4.800E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	2000	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	4.800E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.42 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.875	Wirth, 2007
Proportion of livestock in managed system	1991	0.875	Wirth, 2007
Proportion of livestock in managed system	1992	0.875	Wirth, 2007
Proportion of livestock in managed system	1993	0.881	Wirth, 2007
Proportion of livestock in managed system	1994	0.887	Wirth, 2007
Proportion of livestock in managed system	1995	0.892	Wirth, 2007
Proportion of livestock in managed system	1996	0.898	Wirth, 2007
Proportion of livestock in managed system	1997	0.904	Wirth, 2007
Proportion of livestock in managed system	1998	0.896	Wirth, 2007
Proportion of livestock in managed system	1999	0.889	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.874	Wirth, 2007
Proportion of livestock in managed system	2002	0.866	Wirth, 2007
Proportion of livestock in managed system	2003	0.866	Wirth, 2007
Proportion of livestock in managed system	2004	0.866	Wirth, 2007
State weighted methane conversion factor	1990	0.471	Wirth, 2007
State weighted methane conversion factor	1991	0.474	Wirth, 2007
State weighted methane conversion factor	1992	0.477	Wirth, 2007
State weighted methane conversion factor	1993	0.466	Wirth, 2007
State weighted methane conversion factor	1994	0.473	Wirth, 2007
State weighted methane conversion factor	1995	0.491	Wirth, 2007
State weighted methane conversion factor	1996	0.49	Wirth, 2007
State weighted methane conversion factor	1997	0.496	Wirth, 2007
State weighted methane conversion factor	1998	0.474	Wirth, 2007
State weighted methane conversion factor	1999	0.477	Wirth, 2007
State weighted methane conversion factor	2000	0.467	Wirth, 2007
State weighted methane conversion factor	2001	0.477	Wirth, 2007
State weighted methane conversion factor	2002	0.46	Wirth, 2007
State weighted methane conversion factor	2003	0.472	Wirth, 2007
State weighted methane conversion factor	2004	0.459	Wirth, 2007
State weighted N as N2O emission factor	1990	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.311E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.302E-03 g / g	Wirth, 2007

State weighted N as N2O emission factor	1995	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.276E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.280E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.294E-03 g / g	Wirth, 2007
Typical animal mass	1990	90.8 kg / head	USEPA, 2007f
Typical animal mass	1991	90.8 kg / head	USEPA, 2007f
Typical animal mass	1992	90.8 kg / head	USEPA, 2007f
Typical animal mass	1993	90.8 kg / head	USEPA, 2007f
Typical animal mass	1994	90.8 kg / head	USEPA, 2007f
Typical animal mass	1995	90.8 kg / head	USEPA, 2007f
Typical animal mass	1996	90.8 kg / head	USEPA, 2007f
Typical animal mass	1997	90.8 kg / head	USEPA, 2007f
Typical animal mass	1998	90.8 kg / head	USEPA, 2007f
Typical animal mass	1999	90.8 kg / head	USEPA, 2007f
Typical animal mass	2000	90.8 kg / head	USEPA, 2007f
Typical animal mass	2001	90.8 kg / head	USEPA, 2007f
Typical animal mass	2002	90.8 kg / head	USEPA, 2007f
Typical animal mass	2003	90.8 kg / head	USEPA, 2007f
Typical animal mass	2004	90.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	5.4 g / kg / day	Wirth, 2007

Activity = Livestock population - Swine - market 60-119 lbs

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Swine - market 60-119 lbs	1990	49,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1991	51,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1992	58,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1993	60,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1994	65,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1995	58,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1996	51,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1997	45,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1998	50,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	1999	50,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	2000	43,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	2001	25,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	2002	32,000 head	Wirth, 2007

Livestock population - Swine - market 60-119 lbs	2003	25,000 head	Wirth, 2007
Livestock population - Swine - market 60-119 lbs	2004	32,000 head	Wirth, 2007
Maximum methane production capacity	1990	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	4.800E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	4.800E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.42 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.42 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.875	Wirth, 2007
Proportion of livestock in managed system	1991	0.875	Wirth, 2007
Proportion of livestock in managed system	1992	0.875	Wirth, 2007
Proportion of livestock in managed system	1993	0.881	Wirth, 2007
Proportion of livestock in managed system	1994	0.887	Wirth, 2007
Proportion of livestock in managed system	1995	0.892	Wirth, 2007
Proportion of livestock in managed system	1996	0.898	Wirth, 2007
Proportion of livestock in managed system	1997	0.904	Wirth, 2007
Proportion of livestock in managed system	1998	0.896	Wirth, 2007
Proportion of livestock in managed system	1999	0.889	Wirth, 2007
Proportion of livestock in managed system	2000	0.881	Wirth, 2007
Proportion of livestock in managed system	2001	0.874	Wirth, 2007
Proportion of livestock in managed system	2002	0.866	Wirth, 2007
Proportion of livestock in managed system	2003	0.866	Wirth, 2007
Proportion of livestock in managed system	2004	0.866	Wirth, 2007
State weighted methane conversion factor	1990	0.471	Wirth, 2007
State weighted methane conversion factor	1991	0.474	Wirth, 2007
State weighted methane conversion factor	1992	0.477	Wirth, 2007
State weighted methane conversion factor	1993	0.466	Wirth, 2007
State weighted methane conversion factor	1994	0.473	Wirth, 2007
State weighted methane conversion factor	1995	0.491	Wirth, 2007
State weighted methane conversion factor	1996	0.49	Wirth, 2007
State weighted methane conversion factor	1997	0.496	Wirth, 2007

State weighted methane conversion factor	1998	0.474	Wirth, 2007
State weighted methane conversion factor	1999	0.477	Wirth, 2007
State weighted methane conversion factor	2000	0.467	Wirth, 2007
State weighted methane conversion factor	2001	0.477	Wirth, 2007
State weighted methane conversion factor	2002	0.46	Wirth, 2007
State weighted methane conversion factor	2003	0.472	Wirth, 2007
State weighted methane conversion factor	2004	0.459	Wirth, 2007
State weighted N as N2O emission factor	1990	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	1.319E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	1.311E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.276E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.280E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	1.302E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	1.293E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	1.285E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	1.294E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	1.294E-03 g / g	Wirth, 2007
Typical animal mass	1990	40.6 kg / head	USEPA, 2007f
Typical animal mass	1991	40.6 kg / head	USEPA, 2007f
Typical animal mass	1992	40.6 kg / head	USEPA, 2007f
Typical animal mass	1993	40.6 kg / head	USEPA, 2007f
Typical animal mass	1994	40.6 kg / head	USEPA, 2007f
Typical animal mass	1995	40.6 kg / head	USEPA, 2007f
Typical animal mass	1996	40.6 kg / head	USEPA, 2007f
Typical animal mass	1997	40.6 kg / head	USEPA, 2007f
Typical animal mass	1998	40.6 kg / head	USEPA, 2007f
Typical animal mass	1999	40.6 kg / head	USEPA, 2007f
Typical animal mass	2000	40.6 kg / head	USEPA, 2007f
Typical animal mass	2001	40.6 kg / head	USEPA, 2007f
Typical animal mass	2002	40.6 kg / head	USEPA, 2007f
Typical animal mass	2003	40.6 kg / head	USEPA, 2007f
Typical animal mass	2004	40.6 kg / head	USEPA, 2007f
Volatile solids production rate	1990	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	5.4 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	5.4 g / kg / day	Wirth, 2007

IPCC category =3a2i — Livestock - Manure Management - Poultry

Activity = Livestock population - Broilers

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Broilers	1990	42,018,182 head	Wirth, 2007
Livestock population - Broilers	1991	43,672,727 head	Wirth, 2007
Livestock population - Broilers	1992	42,363,636 head	Wirth, 2007
Livestock population - Broilers	1993	39,272,727 head	Wirth, 2007
Livestock population - Broilers	1994	41,127,273 head	Wirth, 2007
Livestock population - Broilers	1995	42,872,727 head	Wirth, 2007
Livestock population - Broilers	1996	42,581,818 head	Wirth, 2007
Livestock population - Broilers	1997	43,145,455 head	Wirth, 2007
Livestock population - Broilers	1998	11,515,000 head	Wirth, 2007
Livestock population - Broilers	1999	11,807,046 head	Wirth, 2007
Livestock population - Broilers	2000	17,354,546 head	Wirth, 2007
Livestock population - Broilers	2001	17,456,364 head	Wirth, 2007
Livestock population - Broilers	2002	18,415,909 head	Wirth, 2007
Livestock population - Broilers	2003	17,672,727 head	Wirth, 2007
Livestock population - Broilers	2004	16,752,525 head	Wirth, 2007
Maximum methane production capacity	1990	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.600E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	1.1 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	1.1 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.99	Wirth, 2007
Proportion of livestock in managed system	1991	0.99	Wirth, 2007
Proportion of livestock in managed system	1992	0.99	Wirth, 2007
Proportion of livestock in managed system	1993	0.99	Wirth, 2007
Proportion of livestock in managed system	1994	0.99	Wirth, 2007
Proportion of livestock in managed system	1995	0.99	Wirth, 2007

Proportion of livestock in managed system	1996	0.99	Wirth, 2007
Proportion of livestock in managed system	1997	0.99	Wirth, 2007
Proportion of livestock in managed system	1998	0.99	Wirth, 2007
Proportion of livestock in managed system	1999	0.99	Wirth, 2007
Proportion of livestock in managed system	2000	0.99	Wirth, 2007
Proportion of livestock in managed system	2001	0.99	Wirth, 2007
Proportion of livestock in managed system	2002	0.99	Wirth, 2007
Proportion of livestock in managed system	2003	0.99	Wirth, 2007
Proportion of livestock in managed system	2004	0.99	Wirth, 2007
State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	9.900E-04 g / g	Wirth, 2007
Typical animal mass	1990	0.9 kg / head	USEPA, 2007f
Typical animal mass	1991	0.9 kg / head	USEPA, 2007f
Typical animal mass	1992	0.9 kg / head	USEPA, 2007f
Typical animal mass	1993	0.9 kg / head	USEPA, 2007f
Typical animal mass	1994	0.9 kg / head	USEPA, 2007f
Typical animal mass	1995	0.9 kg / head	USEPA, 2007f
Typical animal mass	1996	0.9 kg / head	USEPA, 2007f
Typical animal mass	1997	0.9 kg / head	USEPA, 2007f
Typical animal mass	1998	0.9 kg / head	USEPA, 2007f
Typical animal mass	1999	0.9 kg / head	USEPA, 2007f
Typical animal mass	2000	0.9 kg / head	USEPA, 2007f
Typical animal mass	2001	0.9 kg / head	USEPA, 2007f
Typical animal mass	2002	0.9 kg / head	USEPA, 2007f
Typical animal mass	2003	0.9 kg / head	USEPA, 2007f
Typical animal mass	2004	0.9 kg / head	USEPA, 2007f
Volatile solids production rate	1990	15 g / kg / day	Wirth, 2007

Volatile solids production rate	1991	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	15 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	15 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	15 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	15 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	15 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	15 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	15 g / kg / day	Wirth, 2007

Activity = Livestock population - Hens 1+ yr

- Variable Name -	- Year -	- Value and Units -	- Reference -
Livestock population - Hens 1+ yr	1990	30,400,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1991	30,200,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1992	28,700,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1993	27,500,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1994	27,518,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1995	25,510,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1996	26,650,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1997	26,280,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1998	25,908,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	1999	25,215,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	2000	24,516,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	2001	24,190,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	2002	23,266,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	2003	20,937,000 head	Wirth, 2007
Livestock population - Hens 1+ yr	2004	19,419,000 head	Wirth, 2007
Maximum methane production capacity	1990	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.900E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.695 g / kg / day	USEPA, 2007f

Nitrogen Excretion Rate	1999	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.695 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	1	Wirth, 2007
Proportion of livestock in managed system	1991	1	Wirth, 2007
Proportion of livestock in managed system	1992	1	Wirth, 2007
Proportion of livestock in managed system	1993	1	Wirth, 2007
Proportion of livestock in managed system	1994	1	Wirth, 2007
Proportion of livestock in managed system	1995	1	Wirth, 2007
Proportion of livestock in managed system	1996	1	Wirth, 2007
Proportion of livestock in managed system	1997	1	Wirth, 2007
Proportion of livestock in managed system	1998	1	Wirth, 2007
Proportion of livestock in managed system	1999	1	Wirth, 2007
Proportion of livestock in managed system	2000	1	Wirth, 2007
Proportion of livestock in managed system	2001	1	Wirth, 2007
Proportion of livestock in managed system	2002	1	Wirth, 2007
Proportion of livestock in managed system	2003	1	Wirth, 2007
Proportion of livestock in managed system	2004	1	Wirth, 2007
State weighted methane conversion factor	1990	0.0878	Wirth, 2007
State weighted methane conversion factor	1991	0.0891	Wirth, 2007
State weighted methane conversion factor	1992	0.0909	Wirth, 2007
State weighted methane conversion factor	1993	0.0917	Wirth, 2007
State weighted methane conversion factor	1994	0.0938	Wirth, 2007
State weighted methane conversion factor	1995	0.0981	Wirth, 2007
State weighted methane conversion factor	1996	0.0974	Wirth, 2007
State weighted methane conversion factor	1997	0.1	Wirth, 2007
State weighted methane conversion factor	1998	0.101	Wirth, 2007
State weighted methane conversion factor	1999	0.103	Wirth, 2007
State weighted methane conversion factor	2000	0.101	Wirth, 2007
State weighted methane conversion factor	2001	0.104	Wirth, 2007
State weighted methane conversion factor	2002	0.103	Wirth, 2007
State weighted methane conversion factor	2003	0.104	Wirth, 2007
State weighted methane conversion factor	2004	0.102	Wirth, 2007
State weighted N as N2O emission factor	1990	2.850E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	2.631E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	2.412E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	2.193E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.974E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.756E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.537E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.318E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.099E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	8.800E-04 g / g	Wirth, 2007
Typical animal mass	1990	1.8 kg / head	USEPA, 2007f
Typical animal mass	1991	1.8 kg / head	USEPA, 2007f
Typical animal mass	1992	1.8 kg / head	USEPA, 2007f
Typical animal mass	1993	1.8 kg / head	USEPA, 2007f

Typical animal mass	1994	1.8 kg / head	USEPA, 2007f
Typical animal mass	1995	1.8 kg / head	USEPA, 2007f
Typical animal mass	1996	1.8 kg / head	USEPA, 2007f
Typical animal mass	1997	1.8 kg / head	USEPA, 2007f
Typical animal mass	1998	1.8 kg / head	USEPA, 2007f
Typical animal mass	1999	1.8 kg / head	USEPA, 2007f
Typical animal mass	2000	1.8 kg / head	USEPA, 2007f
Typical animal mass	2001	1.8 kg / head	USEPA, 2007f
Typical animal mass	2002	1.8 kg / head	USEPA, 2007f
Typical animal mass	2003	1.8 kg / head	USEPA, 2007f
Typical animal mass	2004	1.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	10.1 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	10.1 g / kg / day	Wirth, 2007

Activity = Livestock population - Other chickens

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Other chickens	1990	210,000 head	Wirth, 2007
Livestock population - Other chickens	1991	100,000 head	Wirth, 2007
Livestock population - Other chickens	1992	100,000 head	Wirth, 2007
Livestock population - Other chickens	1993	100,000 head	Wirth, 2007
Livestock population - Other chickens	1994	82,000 head	Wirth, 2007
Livestock population - Other chickens	1995	90,000 head	Wirth, 2007
Livestock population - Other chickens	1996	50,000 head	Wirth, 2007
Livestock population - Other chickens	1997	140,000 head	Wirth, 2007
Livestock population - Other chickens	1998	85,000 head	Wirth, 2007
Livestock population - Other chickens	1999	80,000 head	Wirth, 2007
Livestock population - Other chickens	2000	134,000 head	Wirth, 2007
Livestock population - Other chickens	2001	78,000 head	Wirth, 2007
Livestock population - Other chickens	2002	68,000 head	Wirth, 2007
Livestock population - Other chickens	2003	62,000 head	Wirth, 2007
Livestock population - Other chickens	2004	49,000 head	Wirth, 2007
Maximum methane production capacity	1990	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.900E-04 m3 / g	USEPA, 2007f

Maximum methane production capacity	2002	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.900E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.83 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.83 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	1	Wirth, 2007
Proportion of livestock in managed system	1991	1	Wirth, 2007
Proportion of livestock in managed system	1992	1	Wirth, 2007
Proportion of livestock in managed system	1993	1	Wirth, 2007
Proportion of livestock in managed system	1994	1	Wirth, 2007
Proportion of livestock in managed system	1995	1	Wirth, 2007
Proportion of livestock in managed system	1996	1	Wirth, 2007
Proportion of livestock in managed system	1997	1	Wirth, 2007
Proportion of livestock in managed system	1998	1	Wirth, 2007
Proportion of livestock in managed system	1999	1	Wirth, 2007
Proportion of livestock in managed system	2000	1	Wirth, 2007
Proportion of livestock in managed system	2001	1	Wirth, 2007
Proportion of livestock in managed system	2002	1	Wirth, 2007
Proportion of livestock in managed system	2003	1	Wirth, 2007
Proportion of livestock in managed system	2004	1	Wirth, 2007
State weighted methane conversion factor	1990	0.0878	Wirth, 2007
State weighted methane conversion factor	1991	0.0891	Wirth, 2007
State weighted methane conversion factor	1992	0.0909	Wirth, 2007
State weighted methane conversion factor	1993	0.0917	Wirth, 2007
State weighted methane conversion factor	1994	0.0938	Wirth, 2007
State weighted methane conversion factor	1995	0.0981	Wirth, 2007
State weighted methane conversion factor	1996	0.0974	Wirth, 2007
State weighted methane conversion factor	1997	0.1	Wirth, 2007
State weighted methane conversion factor	1998	0.101	Wirth, 2007
State weighted methane conversion factor	1999	0.103	Wirth, 2007
State weighted methane conversion factor	2000	0.101	Wirth, 2007
State weighted methane conversion factor	2001	0.104	Wirth, 2007
State weighted methane conversion factor	2002	0.103	Wirth, 2007
State weighted methane conversion factor	2003	0.104	Wirth, 2007
State weighted methane conversion factor	2004	0.102	Wirth, 2007
State weighted N as N2O emission factor	1990	2.850E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	2.631E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	2.412E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	2.193E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.974E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.756E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.537E-03 g / g	Wirth, 2007

State weighted N as N2O emission factor	1997	1.318E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.099E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	8.800E-04 g / g	Wirth, 2007
Typical animal mass	1990	1.8 kg / head	USEPA, 2007f
Typical animal mass	1991	1.8 kg / head	USEPA, 2007f
Typical animal mass	1992	1.8 kg / head	USEPA, 2007f
Typical animal mass	1993	1.8 kg / head	USEPA, 2007f
Typical animal mass	1994	1.8 kg / head	USEPA, 2007f
Typical animal mass	1995	1.8 kg / head	USEPA, 2007f
Typical animal mass	1996	1.8 kg / head	USEPA, 2007f
Typical animal mass	1997	1.8 kg / head	USEPA, 2007f
Typical animal mass	1998	1.8 kg / head	USEPA, 2007f
Typical animal mass	1999	1.8 kg / head	USEPA, 2007f
Typical animal mass	2000	1.8 kg / head	USEPA, 2007f
Typical animal mass	2001	1.8 kg / head	USEPA, 2007f
Typical animal mass	2002	1.8 kg / head	USEPA, 2007f
Typical animal mass	2003	1.8 kg / head	USEPA, 2007f
Typical animal mass	2004	1.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	10.8 g / kg / day	Wirth, 2007

Activity = Livestock population - Pullets

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Pullets	1990	5,290,000 head	Wirth, 2007
Livestock population - Pullets	1991	4,900,000 head	Wirth, 2007
Livestock population - Pullets	1992	4,500,000 head	Wirth, 2007
Livestock population - Pullets	1993	3,700,000 head	Wirth, 2007
Livestock population - Pullets	1994	3,900,000 head	Wirth, 2007
Livestock population - Pullets	1995	4,100,000 head	Wirth, 2007
Livestock population - Pullets	1996	3,100,000 head	Wirth, 2007
Livestock population - Pullets	1997	4,080,000 head	Wirth, 2007
Livestock population - Pullets	1998	4,000,000 head	Wirth, 2007
Livestock population - Pullets	1999	5,953,000 head	Wirth, 2007
Livestock population - Pullets	2000	5,520,000 head	Wirth, 2007
Livestock population - Pullets	2001	5,002,000 head	Wirth, 2007
Livestock population - Pullets	2002	4,884,000 head	Wirth, 2007
Livestock population - Pullets	2003	4,982,000 head	Wirth, 2007
Livestock population - Pullets	2004	4,208,000 head	Wirth, 2007

Maximum methane production capacity	1990	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.900E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.900E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.695 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.695 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	1	Wirth, 2007
Proportion of livestock in managed system	1991	1	Wirth, 2007
Proportion of livestock in managed system	1992	1	Wirth, 2007
Proportion of livestock in managed system	1993	1	Wirth, 2007
Proportion of livestock in managed system	1994	1	Wirth, 2007
Proportion of livestock in managed system	1995	1	Wirth, 2007
Proportion of livestock in managed system	1996	1	Wirth, 2007
Proportion of livestock in managed system	1997	1	Wirth, 2007
Proportion of livestock in managed system	1998	1	Wirth, 2007
Proportion of livestock in managed system	1999	1	Wirth, 2007
Proportion of livestock in managed system	2000	1	Wirth, 2007
Proportion of livestock in managed system	2001	1	Wirth, 2007
Proportion of livestock in managed system	2002	1	Wirth, 2007
Proportion of livestock in managed system	2003	1	Wirth, 2007
Proportion of livestock in managed system	2004	1	Wirth, 2007
State weighted methane conversion factor	1990	0.0878	Wirth, 2007
State weighted methane conversion factor	1991	0.0891	Wirth, 2007
State weighted methane conversion factor	1992	0.0909	Wirth, 2007
State weighted methane conversion factor	1993	0.0917	Wirth, 2007
State weighted methane conversion factor	1994	0.0938	Wirth, 2007
State weighted methane conversion factor	1995	0.0981	Wirth, 2007
State weighted methane conversion factor	1996	0.0974	Wirth, 2007
State weighted methane conversion factor	1997	0.1	Wirth, 2007
State weighted methane conversion factor	1998	0.101	Wirth, 2007
State weighted methane conversion factor	1999	0.103	Wirth, 2007
State weighted methane conversion factor	2000	0.101	Wirth, 2007

State weighted methane conversion factor	2001	0.104	Wirth, 2007
State weighted methane conversion factor	2002	0.103	Wirth, 2007
State weighted methane conversion factor	2003	0.104	Wirth, 2007
State weighted methane conversion factor	2004	0.102	Wirth, 2007
State weighted N as N2O emission factor	1990	2.850E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	2.631E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	2.412E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	2.193E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	1.974E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	1.756E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	1.537E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	1.318E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	1.099E-03 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	8.800E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	8.800E-04 g / g	Wirth, 2007
Typical animal mass	1990	1.8 kg / head	USEPA, 2007f
Typical animal mass	1991	1.8 kg / head	USEPA, 2007f
Typical animal mass	1992	1.8 kg / head	USEPA, 2007f
Typical animal mass	1993	1.8 kg / head	USEPA, 2007f
Typical animal mass	1994	1.8 kg / head	USEPA, 2007f
Typical animal mass	1995	1.8 kg / head	USEPA, 2007f
Typical animal mass	1996	1.8 kg / head	USEPA, 2007f
Typical animal mass	1997	1.8 kg / head	USEPA, 2007f
Typical animal mass	1998	1.8 kg / head	USEPA, 2007f
Typical animal mass	1999	1.8 kg / head	USEPA, 2007f
Typical animal mass	2000	1.8 kg / head	USEPA, 2007f
Typical animal mass	2001	1.8 kg / head	USEPA, 2007f
Typical animal mass	2002	1.8 kg / head	USEPA, 2007f
Typical animal mass	2003	1.8 kg / head	USEPA, 2007f
Typical animal mass	2004	1.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2000	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	10.8 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	10.8 g / kg / day	Wirth, 2007

Activity = Livestock population - Turkeys

- Variable Name -	*- Year -*	*- Value and Units -*	*- Reference -*
Livestock population - Turkeys	1990	13,125,000 head	Wirth, 2007
Livestock population - Turkeys	1991	11,756,757 head	Wirth, 2007
Livestock population - Turkeys	1992	10,500,000 head	Wirth, 2007
Livestock population - Turkeys	1993	8,653,846 head	Wirth, 2007

Livestock population - Turkeys	1994	7,875,000 head	Wirth, 2007
Livestock population - Turkeys	1995	8,048,780 head	Wirth, 2007
Livestock population - Turkeys	1996	8,035,714 head	Wirth, 2007
Livestock population - Turkeys	1997	7,325,581 head	Wirth, 2007
Livestock population - Turkeys	1998	6,477,273 head	Wirth, 2007
Livestock population - Turkeys	1999	5,833,333 head	Wirth, 2007
Livestock population - Turkeys	2000	6,000,000 head	Wirth, 2007
Livestock population - Turkeys	2001	6,233,333 head	Wirth, 2007
Livestock population - Turkeys	2002	5,900,000 head	Wirth, 2007
Livestock population - Turkeys	2003	5,766,667 head	Wirth, 2007
Livestock population - Turkeys	2004	5,233,333 head	Wirth, 2007
Maximum methane production capacity	1990	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1991	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1992	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1993	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1994	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1995	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1996	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1997	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1998	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	1999	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2000	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2001	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2002	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2003	3.600E-04 m3 / g	USEPA, 2007f
Maximum methane production capacity	2004	3.600E-04 m3 / g	USEPA, 2007f
Nitrogen Excretion Rate	1990	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1991	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1992	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1993	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1994	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1995	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1996	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1997	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1998	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	1999	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2000	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2001	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2002	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2003	0.74 g / kg / day	USEPA, 2007f
Nitrogen Excretion Rate	2004	0.74 g / kg / day	USEPA, 2007f
Proportion of livestock in managed system	1990	0.99	Wirth, 2007
Proportion of livestock in managed system	1991	0.99	Wirth, 2007
Proportion of livestock in managed system	1992	0.99	Wirth, 2007
Proportion of livestock in managed system	1993	0.99	Wirth, 2007
Proportion of livestock in managed system	1994	0.99	Wirth, 2007
Proportion of livestock in managed system	1995	0.99	Wirth, 2007
Proportion of livestock in managed system	1996	0.99	Wirth, 2007
Proportion of livestock in managed system	1997	0.99	Wirth, 2007
Proportion of livestock in managed system	1998	0.99	Wirth, 2007
Proportion of livestock in managed system	1999	0.99	Wirth, 2007
Proportion of livestock in managed system	2000	0.99	Wirth, 2007
Proportion of livestock in managed system	2001	0.99	Wirth, 2007
Proportion of livestock in managed system	2002	0.99	Wirth, 2007
Proportion of livestock in managed system	2003	0.99	Wirth, 2007
Proportion of livestock in managed system	2004	0.99	Wirth, 2007

State weighted methane conversion factor	1990	0.015	Wirth, 2007
State weighted methane conversion factor	1991	0.015	Wirth, 2007
State weighted methane conversion factor	1992	0.015	Wirth, 2007
State weighted methane conversion factor	1993	0.015	Wirth, 2007
State weighted methane conversion factor	1994	0.015	Wirth, 2007
State weighted methane conversion factor	1995	0.015	Wirth, 2007
State weighted methane conversion factor	1996	0.015	Wirth, 2007
State weighted methane conversion factor	1997	0.015	Wirth, 2007
State weighted methane conversion factor	1998	0.015	Wirth, 2007
State weighted methane conversion factor	1999	0.015	Wirth, 2007
State weighted methane conversion factor	2000	0.015	Wirth, 2007
State weighted methane conversion factor	2001	0.015	Wirth, 2007
State weighted methane conversion factor	2002	0.015	Wirth, 2007
State weighted methane conversion factor	2003	0.015	Wirth, 2007
State weighted methane conversion factor	2004	0.015	Wirth, 2007
State weighted N as N2O emission factor	1990	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1991	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1992	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1993	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1994	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1995	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1996	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1997	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1998	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	1999	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2000	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2001	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2002	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2003	9.900E-04 g / g	Wirth, 2007
State weighted N as N2O emission factor	2004	9.900E-04 g / g	Wirth, 2007
Typical animal mass	1990	6.8 kg / head	USEPA, 2007f
Typical animal mass	1991	6.8 kg / head	USEPA, 2007f
Typical animal mass	1992	6.8 kg / head	USEPA, 2007f
Typical animal mass	1993	6.8 kg / head	USEPA, 2007f
Typical animal mass	1994	6.8 kg / head	USEPA, 2007f
Typical animal mass	1995	6.8 kg / head	USEPA, 2007f
Typical animal mass	1996	6.8 kg / head	USEPA, 2007f
Typical animal mass	1997	6.8 kg / head	USEPA, 2007f
Typical animal mass	1998	6.8 kg / head	USEPA, 2007f
Typical animal mass	1999	6.8 kg / head	USEPA, 2007f
Typical animal mass	2000	6.8 kg / head	USEPA, 2007f
Typical animal mass	2001	6.8 kg / head	USEPA, 2007f
Typical animal mass	2002	6.8 kg / head	USEPA, 2007f
Typical animal mass	2003	6.8 kg / head	USEPA, 2007f
Typical animal mass	2004	6.8 kg / head	USEPA, 2007f
Volatile solids production rate	1990	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1991	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1992	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1993	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1994	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1995	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1996	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1997	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1998	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	1999	9.7 g / kg / day	Wirth, 2007

Volatile solids production rate	2000	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	2001	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	2002	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	2003	9.7 g / kg / day	Wirth, 2007
Volatile solids production rate	2004	9.7 g / kg / day	Wirth, 2007