

Pacific Northwest Biosolids Research Results: Ammonia Volatilization

Author	Report	Biosolids Type	Application Rate	Form (& pH if avail)	Location	Soil pH	Application Season	Init. NH ₄ ⁺ -N	1	2	3	8	15	30	60
% of NH ₄ ⁺ -N remaining after these days															
Grey, M. and Henry, C.	Boulder Park Dryland Wheat Biosolids Nitrogen Dynamics 1994 Research Summary.	Anaerobic digested from Renton WWTP.	5 dry tons/ac	Dewatered	Boulder Park, near Mansfield, E. WA	approx 6.0	Fall (Sept 1994)	194 lbs/ac	89%	88%	87%		78%	76%	
% of NH ₄ ⁺ -N remaining after these days															
Grey, M. and Henry, C.	Prosser Poplar Plantation Biosolids Nitrogen Dynamics 1994 Research Results Summary	Anaerobic digested from Renton WWTP.	5 dry tons/ac	Dewatered	WSU's Irrigated Agriculture Research Station at Prosser, E.WA	>8.0	Summer (July 1994)	79 lbs/ac	89%	87%	83%	71%	64%	61%	54%
% of NH ₄ ⁺ -N remaining after these days															
Grey, M. and Henry, C.	Emerald Farms Biosolids Nitrogen Dynamics 93-94 Research Summary	Anaerobic digested from Renton WWTP.	5 dry tons/ac	Dewatered fresh (8.21)	Emerald Farms at Sunnyside, E. Washington.	7	Fall (Sept. 1993)	74 lbs/ac	57%	39%	31%	21%	0%	0%	0%
		"	"	Dewatered fresh (8.61)	Emerald Farms at Sunnyside, E. Washington.	"	Spring (April 1994)	58 lbs/ac	26%	0%	0%	0%	0%	0%	0%
Loss of NH ₄ ⁺ -N (kg/ha/day)															
Henry, C.L; Coles J; Harrison R.B	Nitrogen Status of Two Douglas - fir Stands and Transformations and Losses following reapplication of Biosolids	Anaerobic digested primary from West Point WWTP.	47 dt/ha for either 0,1,2 or 3 years, 25 dt/ha 10 years later.	Liquid.	12 & 65 year old stands at UW Pack Forest, Eatonville in W. WA		Summer (last application August 1992)	n/a	17	10	5	3	1	1	
Loss of NH ₄ ⁺ -N (kg/ha/day)															
Henry,C.L; and Zabowski D.	Volatile Losses of Nitrogen Following fertilization of Ponderosa Pine	Domestic biosolids from the City of Wenatchee	11.4 Mg/ha	Liquid	Mature ponderosa stand on the eastern slopes of the Cascade Mountains.	4.1-4.9	Spring (April 1989)		3	1.5		0.3	0.3	0.3	30 day total 12.5 kg N/ha (10%)