

Article title: A multi-regional soil phosphorus balance for exploring secondary fertilizer potential – the case of Norway

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Authors: Ola Stedje Hanserud*, Eva Brod, Anne Falk Øgaard, Daniel B. Müller, Helge Brattebø

*Corresponding author. E-mail address: ola.hanserud@nibio.no;

Affiliation: Norwegian Institute for Agricultural and Environmental Research (Bioforsk), Department of Soil and Environment, Frederik A. Dahls vei 20, 1430, Aas, Norway;

Norwegian University of Science and Technology, Industrial Ecology Programme, Sem Sælands vei 7, NTNU, 7491, Trondheim, Norway

Online Resource 2: Parameters

Flow	Parameter	Unit	Value	Source	Comments
Housed manure	Dairy cow_excretion	kg P per animal per year	14.4	Karlengen et al. 2012, p.61	
	Suckler cow_excretion	kg P per animal per year	7.8	Karlengen et al. 2012, p.70	
	Other cattle_excretion	kg P per animal per year	4.9	Karlengen et al. 2012, p.65 & 68	Average of bull and heifer excretion. Bull calves excrete 7.5 kg P during their 18 months long life until slaughter.
	Heifer_excretion	kg P per animal per year	4.8	Karlengen et al. 2012, p.65	For heifers we used 25.5 months (average of 24 and 27 months) from birth until slaughter or first calf during which they excrete 10.3 kg P.
	Breeder pig_excretion	kg P per animal per year	5.78	Karlengen et al. 2012, p.87	Sow with piglets
	Fattening pig_excretion	kg P per animal	0.45	Karlengen et al. 2012, p.89	Lifetime <1 year
	Laying hen_excretion	kg P per animal per year	0.157	Karlengen et al. 2012, p.76	
	Meat chicken_excretion	kg P per animal	0.0063	Karlengen et al. 2012, p.74	Lifetime <1 year
	Sheep_excretion	kg P per animal per year	2.1075	Karlengen et al. 2012, p.94	Sheep with lambs, excluding 3 months of excretion on uncultivated land (2.81 kg P x (9/12) months)
	Goat_excretion	kg P per animal per year	2.1	Karlengen et al. 2012, p.96	Goat with kids, excluding excretion on uncultivated land
	Goat_dairy_share_2009		0.556	Statistics Norway 2014	Share of dairy goats of total number of goats
	Goat_dairy_share_2010		0.543	Statistics Norway 2014	Share of dairy goats of total number of goats
	Goat_dairy_share_2011		0.528	Statistics Norway 2014	Share of dairy goats of total number of goats
Plant yields	Wheat	% dry matter	86	Antikainen et al. 2005	
	Barley	% dry matter	86	Antikainen et al. 2005	
	Oats	% dry matter	86	Antikainen et al. 2005	
	Rye and triticale	% dry matter	86	Antikainen et al. 2005	
	Green fodder and silage	% dry matter	23	Antikainen et al. 2005	
	Grass	kg dry matter per feed unit (FEm)	1.176	Bakken et al. 2014	
	Oilseeds	% dry matter	92	Antikainen et al. 2005	
	Potato	% dry matter	22	Antikainen et al. 2005	
	Peas	% dry matter	86	Antikainen et al. 2005	
	Wheat	% P of dry matter	0.4	Antikainen et al. 2005	
	Barley	% P of dry matter	0.38	Antikainen et al. 2005	
	Oats	% P of dry matter	0.39	Antikainen et al. 2005	
	Rye and triticale	% P of dry matter	0.36	Antikainen et al. 2005	
	Green fodder and silage	% P of dry matter	0.32	Antikainen et al. 2005	
	Grass	kg P/tonne dry matter	2.6	Johansen et al. 2003	
	Oilseeds	% P of dry matter	0.86	Antikainen et al. 2005	
	Potato	% P of dry matter	0.21	Antikainen et al. 2005	
	Peas	% P of dry matter	0.47	Antikainen et al. 2005	

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