

Supplementary Materials



Figure S1. The appearance of lettuce at different growth stage, A. after three weeks of planting, B. after six weeks of planting, and C. after eight weeks of planting, the left column is treated greywater with (0.3% - 0.6% urine), the middle column is with (0.15% - 0.3% urine), and the right column is without urine for each growth stage

Table S1. Health risk characterizing computational equations

Risk characteristics	Computational equations
Yearly probability of infection (assuming frequency per year)	$P_{\text{inff/year}} = 1 - (1 - P_{\text{inff/event}})^{\text{frequency per year}}$
Risk of illness from a single exposure	$P_{\text{illness/exposure}} = P_{\text{illness/inff}} * P_{\text{inff}}$
Yearly risk of illness (assuming x exposure frequency per year)	$P_{\text{ill/year}} = 1 - (1 - P_{\text{illness/exposure}})^{\text{frequency per year}}$

Table S2. The average concentration of pathogens in the sewage system assuming 1% of sewage present in the greywater considering *E. coli* as a surrogate for faecal contamination

Microbial pathogens and indicator	Unit	Average concentration in the sewage system ^a	Pathogen concentration in graywater
<i>Cryptosporidium</i>	oocysts/100ml	678.1	6.8
<i>Campylobacter</i>	MPN/100ml	118	1.18
Norovirus	gene copies/100ml	5.1×10^4	5100 (Assume 0.1 % infective virus = 5.1)

^a Pathogen concentration in the sewage depend on literature value [40-42].

Table S3. The proportion of essential plant nutrient uptake by lettuce variety

Urine in irrigation water (%)	Lettuce Variety	Total C (%)	Total N (%)	Total P (%)	Total K (%)	C-N ratio
0.3 - 0.6	<i>Lactuca sativa</i> 'Lobjoits Green Cos'	42,20	4,27	0,33	3,10	9,87
	<i>Lactuca sativa</i> 'Red Salad Bowl'	41,40	4,59	0,36	3,20	9,02
	<i>Lactuca sativa</i> 'Australische Gele'	39,90	4,94	0,39	4,20	8,08
0.15 - 0.3	<i>Lactuca sativa</i> 'Lobjoits Green Cos'	41,90	4,55	0,35	3,70	9,21
	<i>Lactuca sativa</i> 'Red Salad Bowl'	42,50	3,74	0,26	2,80	11,37
	<i>Lactuca sativa</i> 'Australische Gele'	40,50	3,91	0,36	3,80	10,37
0	<i>Lactuca sativa</i> 'Lobjoits Green Cos'	43,10	1,00	0,12	0,83	43,28
	<i>Lactuca sativa</i> 'Red Salad Bowl'	42,90	0,99	0,18	1,10	43,15
	<i>Lactuca sativa</i> 'Australische Gele'	43,10	1,37	0,25	1,20	31,53