Supplementary Materials

Table S1. The components of solution applied to soils for mineral fertilization (F), and corresponding fertilization rates.

Components of fertilizing solution		Dose per 1 kg of soil	Macro-nutrient	Concentration of macronutrient	Dose per 1 kg of soil	Corresponding fertilization rate (approx.)
Formula	Concentration					
	g/L	mL/kg		g/L	mg/kg	kg/ha
NH_4NO_3	14.3	10	N	5.0	50	60
KH_2PO_4	22.0	10	P	5.0	50	60
			K	6.3	63	100
KCl	9.5	4	K	5.0	20	
$MgSO_4$ x 7 H_2O	50.7	3	Mg	5.0	15	18

Table S2. Chemistry of soil pore water. The values of pore water pH and the concentrations of As and potentially toxic metals. Presented data are the mean values of 3 replicates.

Parameter, unit	Time	TV*	DL**	Soil / treatment					
	days	mg/L	mg/L	1/0	1/ M	1/ F	2/ 0	2/ M	2/ F
pH	2	5.5-9.0	Not applicable	8.3	8.3	8.2	8.4	8.1	8.0
	7			8.3	8.6	8.2	8.4	8.3	8.1
	21			8.1	8.1	7.9	8.1	8.1	8.2
	90			8.2	8.2	8.5	8.3	8.4	8.4
	270			7.6	7.4	7.1	7.5	7.6	7.8
As. mg/L	2	0.01	0.01	21.1	36.9	9.8	5.3	29.5	10.7
	7			27.8	81.8	15.9	5.3	27.0	8.4
	21			9.6	19.0	8.1	5.4	25.8	9.5
	90			8.3	12.2	9.5	4.7	20.3	9.6
	270			5.6	7.7	5.6	4.5	10.3	6.0
Cd. mg/L	2	0.005	0.005	<DL	<DL	<DL	<DL	<DL	<DL
	7			<DL	<DL	<DL	<DL	<DL	<DL
	21			<DL	<DL	<DL	<DL	<DL	<DL
	90			<DL	<DL	<DL	<DL	<DL	<DL
	270			<DL	<DL	<DL	<DL	<DL	<DL
Cu. mg/L	2	0.2	0.005	0.029	0.102	0.018	0.016	0.184	0.017
	7			0.011	0.025	0.009	0.009	0.126	0.009
	21			0.016	0.044	0.011	0.010	0.027	0.010
	90			0.013	0.028	0.009	<DL	0.055	0.016
	270			0.009	0.017	0.007	<DL	0.035	0.006
Mn. mg/L	2	1.0	0.01	0.078	0.535	0.042	<DL	0.149	<DL
	7			0.546	1.628	0.160	<DL	0.095	<DL
	21			0.032	0.567	<DL	<DL	0.109	<DL
	90			<DL	<DL	<DL	<DL	<DL	<DL
	270			0.012	<DL	<DL	<DL	0.006	<DL
Pb. mg/L	2	0.1	0.008	<DL	<DL	0.008	<DL	<DL	<DL
	7			<DL	<DL	<DL	<DL	<DL	<DL
	21			<DL	<DL	<DL	<DL	<DL	<DL
	90			<DL	<DL	<DL	<DL	<DL	<DL
	270			<DL	<DL	<DL	<DL	<DL	<DL
Zn. mg/L	2	1.0	0.008	0.033	0.054	0.036	<DL	0.017	<DL
	7			<DL	<DL	<DL	<DL	<DL	<DL
	21			<DL	<DL	<DL	<DL	<DL	<DL
	90			0.008	<DL	<DL	<DL	<DL	<DL
	270			<DL	<DL	<DL	<DL	<DL	<DL

* TV – Threshold value, i.e. upper threshold value for good quality underground water, set by Polish law (Regulation 2016)

** DL – analytical determination limit