



Leibniz-Institute of Vegetable and Ornamental Crops (IGZ)

Nutrient off-take and nutrients in harvest residues of field vegetables

Part 1: Off-take - nutrients taken off the field in harvested produce

Part 2: Harvest residues - nutrients remaining on the field in residues

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Cauliflower	35	7	0.28	0.045	0.30	0.012	0.103	0.36	0.020
Cauliflower, early	35	7	0.28	0.045	0.30	0.012	0.103	0.36	0.020
Cauliflower, big leaf mass	40	7	0.28	0.045	0.30	0.012	0.103	0.36	0.020
Broccoli	15	9	0.45	0.065	0.38	0.020	0.149	0.46	0.033
Broccoli, early	15	9	0.45	0.065	0.38	0.020	0.149	0.46	0.033
Broccoli, big leaf mass	20	9	0.45	0.065	0.38	0.020	0.149	0.46	0.033
Bush bean, manual harvest	12	8	0.25	0.040	0.25	0.025	0.092	0.30	0.041
Bush bean, processing	12	8	0.25	0.040	0.25	0.025	0.092	0.30	0.041
Chicory roots	45	24	0.25	0.053	0.45	0.040	0.121	0.54	0.066
Chicory roots, early forcing	35	24	0.25	0.053	0.45	0.040	0.121	0.54	0.066
Chinese cabbage, planted	70	6	0.15	0.040	0.25	0.010	0.092	0.30	0.017

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Chinese cabbage, planted, early	70	6	0.15	0.040	0.25	0.010	0.092	0.30	0.017
Chinese cabbage, planted, late	70	6	0.15	0.040	0.25	0.010	0.092	0.30	0.017
Chinese cabbage, sown	70	6	0.15	0.040	0.25	0.010	0.092	0.30	0.017
Chinese cabbage, sown, late	70	6	0.15	0.040	0.25	0.010	0.092	0.30	0.017
Dill, Processing	25	10	0.30	0.040	0.50	0.025	0.092	0.60	0.041
Dill - leaves	20	10	0.30	0.040	0.50	0.025	0.092	0.60	0.041
Lamb's lettuce	8	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, early	8	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, late	8	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, large leaves	13	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, overwinter, spring	8	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Kale, manual leaf harvest	20	15	0.60	0.080	0.45	0.025	0.183	0.54	0.041
Kale, mechanical harvest	40	15	0.49	0.071	0.49	0.025	0.163	0.59	0.041
Cucumber, pickling, sown	70	4	0.15	0.030	0.20	0.012	0.069	0.24	0.020
Cucumber, pickling, planted	70	4	0.15	0.030	0.20	0.012	0.069	0.24	0.020
Cucumber, pickling, big leaf mass	100	4	0.15	0.030	0.20	0.012	0.069	0.24	0.020
Fennel, planted	40	7	0.20	0.030	0.40	0.020	0.069	0.48	0.033
Fennel, planted, early	40	7	0.20	0.030	0.40	0.020	0.069	0.48	0.033
Fennel, planted, late	40	7	0.20	0.030	0.40	0.020	0.069	0.48	0.033
Fennel, sown	30	7	0.20	0.030	0.40	0.020	0.069	0.48	0.033
Fennel, sown, late	30	7	0.20	0.030	0.40	0.020	0.069	0.48	0.033
Kohlrabi	45	7	0.28	0.045	0.35	0.015	0.103	0.42	0.025
Kohlrabi, early	45	7	0.28	0.045	0.35	0.015	0.103	0.42	0.025
Kohlrabi, late	45	7	0.28	0.045	0.35	0.015	0.103	0.42	0.025
Kohlrabi, tuber size > 12 cm Ø	70	7	0.23	0.045	0.35	0.015	0.103	0.42	0.025
Pumpkin	40	12	0.25	0.090	0.46	0.048	0.206	0.55	0.080

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Mark pea, early to middle maturity	6	23	1.00	0.100	0.30	0.035	0.229	0.36	0.058
Mark pea, middle to late maturity	8	10	1.00	0.100	0.30	0.035	0.229	0.36	0.058
Carrot, bunching	60	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, bunching, early	50	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, bunching, late	60	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, processing	90	10	0.13	0.035	0.35	0.015	0.080	0.42	0.025
Carrot, wash	70	10	0.13	0.035	0.35	0.015	0.080	0.42	0.025
Carrot, wash, early	60	10	0.13	0.035	0.35	0.015	0.080	0.42	0.025
Carrot, wash, late	70	10	0.13	0.035	0.35	0.015	0.080	0.42	0.025
Parsnip	40	20	0.25	0.103	0.60	0.053	0.236	0.72	0.088
Parsley, leaves, 1st cut	24	11	0.45	0.050	0.55	0.022	0.115	0.66	0.036
Parsley, leaves, per cut	16	11	0.45	0.050	0.55	0.022	0.115	0.66	0.036
Parsley, overwinter, spring	24	11	0.45	0.050	0.55	0.022	0.115	0.66	0.036
Parsley, roots	40	15	0.42	0.060	0.70	0.055	0.137	0.84	0.091
Leek, planted	50	11	0.25	0.035	0.30	0.020	0.080	0.36	0.033
Leek, planted, early	40	11	0.25	0.035	0.30	0.020	0.080	0.36	0.033
Leek, planted, late	55	11	0.25	0.035	0.30	0.020	0.080	0.36	0.033
Leek, sown	55	11	0.25	0.035	0.30	0.020	0.080	0.36	0.033
Leek, overwinter, spring	40	11	0.25	0.035	0.30	0.020	0.080	0.36	0.033
Radish, small	30	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, small, early	30	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, small, late	30	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, bunching,	50	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, bunching, early	50	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, bunching, late	50	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, German	55	5	0.14	0.035	0.33	0.010	0.080	0.40	0.017

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Radish, German, early	55	5	0.14	0.035	0.33	0.010	0.080	0.40	0.017
Radish, German, late	55	5	0.14	0.035	0.33	0.010	0.080	0.40	0.017
Radish, Japanese	100	5	0.10	0.026	0.28	0.012	0.060	0.34	0.020
Radish, Japanese, early	90	5	0.10	0.026	0.28	0.012	0.060	0.34	0.020
Radish, Japanese, late	100	5	0.10	0.026	0.28	0.012	0.060	0.34	0.020
Brussels sprouts, fast growth	25	15	0.65	0.085	0.55	0.025	0.195	0.66	0.041
Brussels sprouts, medium growth	25	15	0.65	0.085	0.55	0.025	0.195	0.66	0.041
Brussels sprouts, slow growth	25	15	0.65	0.085	0.55	0.025	0.195	0.66	0.041
Red beet	60	15	0.28	0.050	0.40	0.030	0.115	0.48	0.050
Red beet, Baby Beet	40	14	0.28	0.050	0.40	0.030	0.115	0.48	0.050
Red beet, bunching	50	12	0.27	0.045	0.46	0.050	0.103	0.55	0.083
Red cabbage, fast growth	40	10	0.22	0.035	0.30	0.015	0.080	0.36	0.025
Red cabbage, medium growth	50	10	0.22	0.035	0.30	0.015	0.080	0.36	0.025
Red cabbage, slow growth	60	10	0.22	0.035	0.30	0.015	0.080	0.36	0.025
Rocket, fine leaf, summer	17.5	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, fine leaf, April, May	17.5	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, fine leaf, early	17.5	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, fine leaf, late	17.5	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, summer	30	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, April, May	30	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, early	30	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, late	30	7	0.40	0.045	0.44	0.030	0.103	0.53	0.050
Lettuce, baby leaf	14	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, baby leaf, early	14	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, baby leaf, late	14	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, lollo/oak leaf, green	35	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Lettuce, lollo/oak leaf, green, early	35	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, green, late	35	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red	30	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red, early	30	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red, late	30	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, eisberg	60	5	0.14	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, eisberg, early	50	5	0.14	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, eisberg, late	60	5	0.14	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, endive, frisee	35	8	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, frisee, early	35	8	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, frisee, late	35	8	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves	60	8	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves, early	60	8	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves, late	60	8	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, butterhead	50	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025
Lettuce, butterhead, early	50	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025
Lettuce, butterhead, late	50	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025
Lettuce, radicchio	28	10	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, radicchio, early	28	10	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, radicchio, late	28	10	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, romaine	45	5	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine, early	45	5	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine, late	45	5	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts	30	5	0.24	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts, early	30	5	0.24	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts, late	30	5	0.24	0.040	0.33	0.013	0.092	0.40	0.022

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Lettuce, sugar loaf	60	8	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, sugar loaf, early	60	8	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, sugar loaf, late	60	8	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, different kinds	45	6	0.20	0.040	0.33	0.015	0.092	0.40	0.025
Chives, 1st cut	10	12	0.50	0.060	0.45	0.035	0.137	0.54	0.058
Chives, per following cut	15	12	0.50	0.060	0.45	0.035	0.137	0.54	0.058
Chives, sown, rhizome for forcing	28	12	0.50	0.060	0.45	0.035	0.137	0.54	0.058
Black salsify	30	20	0.23	0.070	0.32	0.025	0.160	0.39	0.041
Celeriac, root tuber, bunching	60	12	0.27	0.055	0.47	0.020	0.126	0.57	0.033
Celeriac, root tuber, bunching, early	50	12	0.27	0.055	0.47	0.020	0.126	0.57	0.033
Celeriac, root tuber	65	10	0.25	0.065	0.45	0.015	0.149	0.54	0.025
Celeriac, stalks	50	12	0.25	0.050	0.45	0.020	0.115	0.54	0.033
Turnip, May-	65	7	0.17	0.045	0.35	0.022	0.103	0.42	0.036
Turnip, „Teltow“, late	15	20	0.45	0.105	0.55	0.050	0.241	0.66	0.083
Spinach, leaves, fresh market	20	8	0.40	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, baby leaves, fresh market	10	8	0.45	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, leaves	25	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, leaves, early	20	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, leaves, late	25	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing	30	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing, early	25	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing, late	30	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, overwinter, spring	25	8	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Runner bean	25	8	0.25	0.040	0.25	0.025	0.092	0.30	0.041
White cabbage, fresh market, fast growth	40	8	0.22	0.032	0.26	0.015	0.073	0.31	0.025
White cabbage, fresh market, medium growth	60	8	0.20	0.032	0.26	0.015	0.073	0.31	0.025

Part 1: Off-take - nutrients taken off the field in harvested produce

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
White cabbage, fresh market, slow growth	70	8	0.20	0.032	0.26	0.015	0.073	0.31	0.025
White cabbage, processing, medium growth	100	8	0.20	0.032	0.26	0.015	0.073	0.31	0.025
White cabbage, processing, fast growth	80	8	0.20	0.032	0.26	0.015	0.073	0.31	0.025
White cabbage, processing, slow growth	100	8	0.20	0.032	0.26	0.015	0.073	0.31	0.025
Savoy cabbage, fast growth	30	10	0.35	0.050	0.32	0.015	0.115	0.39	0.025
Savoy cabbage, medium growth	35	10	0.35	0.050	0.32	0.015	0.115	0.39	0.025
Savoy cabbage, slow growth	40	10	0.35	0.050	0.32	0.015	0.115	0.39	0.025
Zucchini, planted	65	5	0.16	0.026	0.17	0.016	0.060	0.20	0.027
Zucchini, planted, early	50	5	0.16	0.026	0.17	0.016	0.060	0.20	0.027
Zucchini, sown	50	5	0.16	0.026	0.17	0.016	0.060	0.20	0.027
Sweet corn, fast growth	17	22	0.35	0.070	0.22	0.035	0.160	0.26	0.058
Sweet corn, medium growth	20	22	0.35	0.070	0.22	0.035	0.160	0.26	0.058
Sweet corn, slow growth	20	22	0.35	0.070	0.22	0.035	0.160	0.26	0.058
Onion, bunching	68	10	0.20	0.026	0.20	0.018	0.060	0.24	0.030
Onion, bunching, early	68	10	0.20	0.026	0.20	0.018	0.060	0.24	0.030
Onion, bunching, overwinter, spring	40	10	0.20	0.026	0.20	0.018	0.060	0.24	0.030
Onion, fast growth	60	14	0.18	0.035	0.20	0.015	0.080	0.24	0.025
Onion, medium growth	60	14	0.18	0.035	0.20	0.015	0.080	0.24	0.025
Onion, slow growth	60	14	0.18	0.035	0.20	0.015	0.080	0.24	0.025
Onion, overwinter, spring	45	14	0.18	0.035	0.20	0.015	0.080	0.24	0.025

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Cauliflower, big leaf mass	60	9	0.30	0.050	0.35	0.015	0.115	0.42	0.025
Broccoli	55	10	0.35	0.060	0.45	0.030	0.137	0.54	0.050
Broccoli, early	55	10	0.35	0.060	0.45	0.030	0.137	0.54	0.050
Broccoli, big leaf mass	70	10	0.30	0.060	0.45	0.030	0.137	0.54	0.050
Bush bean, manual harvest	22	18	0.40	0.040	0.45	0.075	0.092	0.54	0.124
Bush bean, processing	22	18	0.40	0.040	0.45	0.075	0.092	0.54	0.124
Chicory roots	30	10	0.25	0.024	0.52	0.047	0.055	0.63	0.078
Chicory roots, early forcing	30	10	0.25	0.024	0.52	0.047	0.055	0.63	0.078
Chinese cabbage, planted	50	6	0.18	0.050	0.30	0.010	0.115	0.36	0.017
Chinese cabbage, planted, early	50	6	0.18	0.050	0.30	0.010	0.115	0.36	0.017
Chinese cabbage, planted, late	50	6	0.18	0.050	0.30	0.010	0.115	0.36	0.017
Chinese cabbage, sown	50	6	0.18	0.050	0.30	0.010	0.115	0.36	0.017
Chinese cabbage, sown, late	50	6	0.18	0.050	0.30	0.010	0.115	0.36	0.017
Dill, processing	5	10	0.30	0.040	0.50	0.025	0.092	0.60	0.041
Dill - leaves	2	10	0.30	0.040	0.50	0.025	0.092	0.60	0.041
Lamb's lettuce	2	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, early	2	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, late	2	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's large leaves	2	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Lamb's lettuce, overwinter, spring	2	9	0.45	0.043	0.54	0.043	0.099	0.65	0.071
Kale, manual leaf harvest	25	15	0.35	0.060	0.55	0.025	0.137	0.66	0.041
Kale, mechanical harvest	10	15	0.35	0.060	0.55	0.025	0.137	0.66	0.041
Cucumber, pickling, sown	50	8	0.20	0.055	0.40	0.060	0.126	0.48	0.099
Cucumber, pickling, planted	50	8	0.20	0.055	0.40	0.060	0.126	0.48	0.099
Cucumber, pickling, big leaf mass	55	8	0.20	0.055	0.40	0.060	0.126	0.48	0.099
Fennel, planted	30	10	0.30	0.040	0.45	0.045	0.092	0.54	0.075

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Fennel, planted, early	30	10	0.30	0.040	0.45	0.045	0.092	0.54	0.075
Fennel, planted, late	30	10	0.30	0.040	0.45	0.045	0.092	0.54	0.075
Fennel, sown	25	10	0.30	0.040	0.45	0.045	0.092	0.54	0.075
Fennel, sown, late	25	10	0.30	0.040	0.45	0.045	0.092	0.54	0.075
Kohlrabi	15	11	0.35	0.045	0.35	0.025	0.103	0.42	0.041
Kohlrabi, early	15	11	0.35	0.045	0.35	0.025	0.103	0.42	0.041
Kohlrabi, late	15	11	0.35	0.045	0.35	0.025	0.103	0.42	0.041
Kohlrabi, tuber size > 12 cm Ø	20	11	0.28	0.045	0.35	0.025	0.103	0.42	0.041
Pumpkin	40	18	0.25	0.080	0.55	0.100	0.183	0.66	0.166
Mark pea, early to middle maturity	32	20	0.40	0.050	0.47	0.050	0.115	0.57	0.083
Mark pea, middle to late maturity	32	15	0.40	0.050	0.47	0.050	0.115	0.57	0.083
Carrot, bunching	10	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, bunching, early	10	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, bunching, late	10	11	0.17	0.036	0.44	0.027	0.082	0.53	0.045
Carrot, processing	30	16	0.30	0.040	0.60	0.040	0.092	0.72	0.066
Carrot, wash	20	16	0.30	0.040	0.60	0.040	0.092	0.72	0.066
Carrot, wash, early	20	16	0.30	0.040	0.60	0.040	0.092	0.72	0.066
Carrot, wash, late	20	16	0.30	0.040	0.60	0.040	0.092	0.72	0.066
Parsnip	20	20	0.50	0.080	0.75	0.180	0.183	0.90	0.298
Parsley, leaves, 1st cut	0								
Parsley, leaves, per cut	6	11	0.40	0.050	0.55	0.022	0.115	0.66	0.036
Parsley, overwinter, spring	6	11	0.40	0.050	0.55	0.022	0.115	0.66	0.036
Parsley, roots	20	15	0.21	0.060	0.70	0.055	0.137	0.84	0.091
Leek, planted	34	12	0.30	0.030	0.35	0.020	0.069	0.42	0.033
Leek, planted, early	34	12	0.30	0.030	0.35	0.020	0.069	0.42	0.033
Leek, planted, late	34	12	0.30	0.030	0.35	0.020	0.069	0.42	0.033

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Leek, sown	34	12	0.30	0.030	0.35	0.020	0.069	0.42	0.033
Leek, overwinter, spring	34	12	0.30	0.030	0.35	0.020	0.069	0.42	0.033
Radish, small	5	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, small, early	5	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, small, late	5	6	0.20	0.030	0.28	0.020	0.069	0.34	0.033
Radish, bunching,	10	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, bunching, early	10	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, bunching, late	10	7	0.17	0.033	0.30	0.016	0.076	0.36	0.027
Radish, German	25	9	0.24	0.030	0.40	0.030	0.069	0.48	0.050
Radish, German, early	25	9	0.24	0.030	0.40	0.030	0.069	0.48	0.050
Radish, German, late	25	9	0.24	0.030	0.40	0.030	0.069	0.48	0.050
Radish, Japanese	40	9	0.21	0.030	0.40	0.030	0.069	0.48	0.050
Radish, Japanese, early	30	9	0.21	0.030	0.40	0.030	0.069	0.48	0.050
Radish, Japanese, late	40	9	0.21	0.030	0.40	0.030	0.069	0.48	0.050
Brussels sprouts, fast growth	65	18	0.40	0.060	0.50	0.025	0.137	0.60	0.041
Brussels sprouts, medium growth	65	18	0.40	0.060	0.50	0.025	0.137	0.60	0.041
Brussels sprouts, slow growth	65	18	0.40	0.060	0.50	0.025	0.137	0.60	0.041
Red beet	40	10	0.25	0.040	0.55	0.070	0.092	0.66	0.116
Red beet, Baby Beet	20	10	0.25	0.040	0.55	0.070	0.092	0.66	0.116
Red beet, bunching	10	12	0.27	0.045	0.46	0.050	0.103	0.55	0.083
Red cabbage, fast growth	35	14	0.30	0.045	0.40	0.025	0.103	0.48	0.041
Red cabbage, medium growth	40	14	0.30	0.045	0.40	0.025	0.103	0.48	0.041
Red cabbage, slow growth	50	14	0.30	0.045	0.40	0.025	0.103	0.48	0.041
Rocket, fine leaf, summer	12.5	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, fine leaf, April, May	12.5	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, fine leaf, early	12.5	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Rocket, fine leaf, late	12.5	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, summer	15	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, April, May	15	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, early	15	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Rocket, coarse leaf, late	15	7	0.30	0.045	0.44	0.030	0.103	0.53	0.050
Lettuce, baby leaf	1	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, baby leaf, early	1	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, baby leaf, late	1	7	0.35	0.035	0.50	0.027	0.080	0.60	0.045
Lettuce, lollo/oak leaf, green	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, green, early	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, green, late	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red, early	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, lollo/oak leaf, red, late	10	6	0.19	0.030	0.37	0.012	0.069	0.45	0.020
Lettuce, eisberg	25	5	0.20	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, eisberg, early	20	5	0.20	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, eisberg, late	25	5	0.20	0.025	0.25	0.010	0.057	0.30	0.017
Lettuce, endive, frisee	10	10	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, frisee, early	10	10	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, frisee, late	10	10	0.25	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves	20	10	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves, early	20	10	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, endive, smooth leaves, late	20	10	0.20	0.026	0.46	0.018	0.060	0.55	0.030
Lettuce, butterhead	10	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025
Lettuce, butterhead, early	10	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025
Lettuce, butterhead, late	10	5	0.18	0.030	0.30	0.015	0.069	0.36	0.025

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Lettuce, radicchio	22	12	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, radicchio, early	22	12	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, radicchio, late	22	12	0.25	0.040	0.40	0.020	0.092	0.48	0.033
Lettuce, romaine	10	8	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine, early	10	8	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine, late	10	8	0.20	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts	10	8	0.35	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts, early	10	8	0.35	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, romaine hearts, late	10	8	0.35	0.040	0.33	0.013	0.092	0.40	0.022
Lettuce, sugar loaf	20	12	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, sugar loaf, early	20	12	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, sugar loaf, late	20	12	0.20	0.050	0.25	0.010	0.115	0.30	0.017
Lettuce, different kinds	10	6	0.20	0.040	0.33	0.015	0.092	0.40	0.025
Chives, 1st cut	0								
Chives, last cut	5	15	0.50	0.060	0.45	0.035	0.137	0.54	0.058
Chives, sown, rhizome for forcing	22	15	0.50	0.060	0.45	0.035	0.137	0.54	0.058
Black salsify	20	15	0.25	0.040	0.60	0.040	0.092	0.72	0.066
Celeriac, root tuber, bunching	5	12	0.27	0.055	0.47	0.020	0.126	0.57	0.033
Celeriac, root tuber, bunching, early	5	12	0.27	0.055	0.47	0.020	0.126	0.57	0.033
Celeriac, root tuber	25	12	0.30	0.035	0.50	0.030	0.080	0.60	0.050
Celeriac, stalks	30	12	0.25	0.055	0.47	0.020	0.126	0.57	0.033
Turnip, May-	15	7	0.17	0.045	0.35	0.022	0.103	0.42	0.036
Turnip, „Teltow“, late	25	12	0.25	0.050	0.40	0.035	0.115	0.48	0.058
Spinach, leaves, fresh market	5	10	0.40	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, baby leaves, fresh market	5	10	0.45	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, leaves	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Spinach, leaves, early	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, leaves, late	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing, early	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, processing, late	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Spinach, overwinter, spring	15	10	0.36	0.050	0.55	0.050	0.115	0.66	0.083
Runner bean	45	18	0.32	0.040	0.45	0.075	0.092	0.54	0.124
White cabbage, fresh market, fast growth	50	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
White cabbage, fresh market, medium growth	40	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
White cabbage, fresh market, slow growth	50	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
White cabbage, processing, medium growth	50	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
White cabbage, processing, fast growth	50	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
White cabbage, processing, slow growth	50	11	0.30	0.035	0.35	0.026	0.080	0.42	0.043
Savoy cabbage, fast growth	30	15	0.40	0.050	0.40	0.028	0.115	0.48	0.046
Savoy cabbage, medium growth	35	15	0.40	0.050	0.40	0.028	0.115	0.48	0.046
Savoy cabbage, slow growth	40	15	0.40	0.050	0.40	0.028	0.115	0.48	0.046
Zucchini, planted	55	8	0.30	0.040	0.35	0.060	0.092	0.42	0.099
Zucchini, planted, early	50	8	0.30	0.040	0.35	0.060	0.092	0.42	0.099
Zucchini, sown	50	8	0.30	0.040	0.35	0.060	0.092	0.42	0.099
Sweet corn, fast growth	33	18	0.30	0.040	0.25	0.060	0.092	0.30	0.099
Sweet corn, medium growth	40	18	0.30	0.040	0.25	0.060	0.092	0.30	0.099
Sweet corn, slow growth	40	18	0.30	0.040	0.25	0.060	0.092	0.30	0.099
Onion, bunching	12	10	0.20	0.026	0.20	0.040	0.060	0.24	0.066
Onion, bunching, early	12	10	0.20	0.026	0.20	0.040	0.060	0.24	0.066
Onion, bunching, overwinter, spring	20	10	0.20	0.026	0.20	0.040	0.060	0.24	0.066
Onion, fast growth	15	40	0.40	0.060	0.22	0.120	0.137	0.26	0.199

Part 2: Harvest residues - nutrients remaining on the field in residues

Crop name	Fresh mass	Dry matter	N	P	K	Mg	P ₂ O ₅	K ₂ O	MgO
	t ha ⁻¹	%							
Onion, medium growth	15	40	0.40	0.060	0.22	0.120	0.137	0.26	0.199
Onion, slow growth	15	40	0.40	0.060	0.22	0.120	0.137	0.26	0.199
Onion, overwinter, spring	25	40	0.40	0.060	0.22	0.120	0.137	0.26	0.199

Source

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