Factors	Sub-factors
Type of vegetable (3)	, FHEHUJ OHWWXFH 5RPDQLD OHWWXFH &RFRXU
Season (2 x2x2x2x2)	Winter ,Spring ,Summer ,autumn{ 2times repeated SHU VHDVRQ`
Origins(3)	3 different farms (per practice)
Sample (5)	5 sub-samples (plants)

+HDG DQG OHDIV ZHUH DQDO\]HG VHSDUDWHO\ /HDI EODGHV DQG SHWLROHV ZHUH DQDO\]HG VHSDUDWHO\ and averaged with

Table 1: Sampling method of market survey.

analyzed separately and averaged to produce one sample data point which has been summarized in table 1.

Pretreatment and nitrate analysis

Both outdoors and glasshouse vegetables were purchased on the same day and all samples (including subsamples) were rapped with plastic cover at the purchase time. All sub-samples were put into cooler boxes immediately a er purchasing and washed to remove soil. Fresh weight per plant for lettuce or petioles for celery was measured. Dead leaves and non-edible parts of samples were removed and weighed. A half lettuce or celery of each sub-sample was taken for nitrate determination and another half was used for moisture measurement. Moisture content was determined by the di erence between weights before and a er heating at 60 – 70°c for 48 hr. For nitrate analysis, sub-samples were chapped and mixed with a food processor. Five

to 100 grams of sub-sample were weighed and placed into a mixer. Deionized water was added to the samples (nine times than exact the sample weight) and the water and sub-sample were homogenized for 10 minutes. A 30 gram sample of homogenate was placed in a centrifuge tube, and 0.5 ml of Pb_2 was added and the tube was capped and shaked well by the hand a er adding CH_2. All samples were centrifuged at 3500 rpm for 3 min. e supernatant was then separated and ltered with lter paper wattman 1 and nitrate concentration in the ltrate was determined calorimetrically by a ow injection analysis system [10]. Nitrate content was expressed as mg nitrate per kg on a fresh weight basis (mg NO_3/kg FW) unless otherwise stated. Nitrate concentration in celery as a whole plant was calculated from nitrate content in leaves and petiols and the weight of each part.

Statistical analysis

Values were expressed as the mean (g/kg) ± standard deviation (SD). Seasonal di erences on the basis of the type of vegetables and cultivation practices (conventional vs. greenhouse) were determined by student t-test. Seasonal changes were calculated by one way Anova and for analysis of the role of multiple factors univariate analysis was used by SPSS 16.Probability values of <0.05 were considered signi cant. Coe cients of variation (CV = standard deviation / average × 100) were calculated to indicate variation within sub-samples and factors. Values for average moisture content were calculated by % w/w.

Iceberg	Season	Practice	n	NO_3 mg/Kg Fw				NO_3%DW			
				Ave.	Min.	Max.	CV%	Ave.	Min.	Max.	CV%
Iceberg	winter	Outdoors	6	3654	2706	4788	35	2.25	1.67	2.95	16
		Glasshouse	6	2234	1987	3831	32	2.15	1.59	2.71	25
	Winter total		12	2944	1987	4788	34	2.20	1.59	2.95	19
	Spring	Outdoors	6	2230	2130	3400	30	2.01	1.86	2.54	9.7
		Glasshouse	6	1977	1723	2406	18	2.33	1.76	2.34	11
	Spring total		12	2104	1723	3400	25	2.17	1.76	2.54	10
	Summer	Outdoors	6	1970	1870	2100	8	1.98	1.27	1.96	30
		Glasshouse	6	1677	1760	2300	23	1.88	1.32	1.81	31
	Summer total		12	1824	1760	2300	15	1.93	1.27	1.96	29
	Autumn	Outdoors	6	3010	2238	4507	30	2.19	1.57	2.88	25
		Glasshouse	6	2005	1878	3778	28	2.11	1.51	2.45	62
	Autumn total		12	2508	1878	4507	29	2.15	1.51	2.88	43
	Outdoors produced total		24	2716	1870	4788	26	2.05	1.27	2.71	23
	Glasshouse produced total		24	1973	1723	3831	25.2	2.15	1.32	2.95	28
Romania	Iceberg total		48	2344	1723	4788	25.5	2.10	1.27	2.95	26
	Season	Practice	n	mgNO							