

Table S1: Formulation and proximate composition of the rearing substrates, and total weight of corresponding prepupae biomass

REARING SUBSTRATES FORMULATION											PROXIMATE COMPOSITION OF REARING SUBSTRATES FORMULATED							Total prepupae biomass (g)	
Entomology code	Exotic fruits (%)	Pineapple (%)	Kiwifruit (%)	Apple (%)	Melon (%)	Peach (%)	Tomato (%)	Legume (%)	Corn (%)	Pomace (%)	Humidity (%)	Lipid (%)	Cru de protein (%)	Ash (%)	Polyp henols (%)	Dietary fibre (%)	Non-structural carbohydrate (%)		
All-Year group	A	50	0	0	0	50	/	/	/	/	/	87,51	0,08	0,60	0,60	0,01	3,83	7,72	26,25
	B	10	10	60	10	10	/	/	/	/	/	87,76	0,07	0,77	1,25	0,00	2,43	7,79	19,47
	C	0	100	0	0	0	/	/	/	/	/	86,51	0,21	0,52	0,62	0,00	0,75	11,39	17,15
	D	0	0	0	0	100	/	/	/	/	/	93,78	0,08	0,48	0,71	0,00	5,61	0,00	22,54
	E	0	0	0	100	0	/	/	/	/	/	90,83	0,04	0,35	0,32	0,00	1,54	6,92	20,4
	F	100	0	0	0	0	/	/	/	/	/	81,23	0,08	0,72	0,48	0,01	2,04	15,44	18,31
	G	20	20	20	20	20	/	/	/	/	/	87,98	0,09	0,60	0,77	0,00	2,47	8,22	23,51
	H	50	0	50	0	0	/	/	/	/	/	84,39	0,07	0,83	1,11	0,01	2,22	11,40	20,83
	J	0	50	0	0	50	/	/	/	/	/	90,15	0,15	0,50	0,67	0,00	3,18	5,70	23,44
	L	0	0	50	0	50	/	/	/	/	/	90,66	0,07	0,71	1,22	0,00	4,00	3,68	20,93
	N	0	50	0	50	0	/	/	/	/	/	88,67	0,13	0,44	0,47	0,00	1,15	9,16	22,32
	P	10	10	10	60	10	/	/	/	/	/	89,40	0,07	0,48	0,55	0,00	2,00	7,57	22,77
	Q	0	0	0	50	50	/	/	/	/	/	92,31	0,06	0,42	0,52	0,00	3,58	3,46	24,57
	R	10	10	10	10	60	/	/	/	/	/	90,88	0,09	0,54	0,74	0,00	4,04	4,11	25,34
	S	0	50	50	0	0	/	/	/	/	/	87,03	0,13	0,73	1,18	0,00	1,57	9,38	19,66
	T	50	50	0	0	0	/	/	/	/	/	83,87	0,15	0,62	0,55	0,01	1,40	13,42	20,69
	U	0	0	100	0	0	/	/	/	/	/	87,54	0,05	0,94	1,73	0,00	2,39	7,36	13,06
	V	50	0	0	50	0	/	/	/	/	/	86,03	0,06	0,54	0,40	0,01	1,79	11,18	22,07
	X	60	10	10	10	10	/	/	/	/	/	84,60	0,09	0,66	0,63	0,01	2,25	11,83	22,59
	Y	10	60	10	10	10	/	/	/	/	/	87,24	0,15	0,56	0,70	0,00	1,61	9,81	20,6
Z	0	0	50	50	0	/	/	/	/	/	89,19	0,05	0,65	1,03	0,00	1,97	7,14	19,59	
Summer group	Entomology code	Exotic fruits (%)	Pineapple (%)	Kiwifruit (%)	Apple (%)	Melon (%)	Peach (%)	Tomato (%)	Legume (%)	Corn (%)	Pomace (%)	Humidity (%)	Lipid (%)	Cru de protein (%)	Ash (%)	Polyp henols (%)	Dietary fibre (%)	Non-structural carbohydrate (%)	
	A	0	/	/	/	0	67	33	/	/	/	86,48	0,67	1,59	0,62	0,02	8,13	2,87	39,54
	B	0	/	/	/	0	100	0	/	/	/	89,89	0,82	0,87	0,52	0,01	3,58	4,30	36,69
	C	20	/	/	/	47	16	17	/	/	/	88,27	0,25	1,01	0,65	0,01	6,49	3,81	36,9
	D	10	/	/	/	24	33	33	/	/	/	86,53	0,43	1,48	0,66	0,01	8,45	2,98	39,45
	E	10	/	/	/	23	0	67	/	/	/	83,12	0,28	2,20	0,76	0,02	13,00	1,54	42,42
	F	20	/	/	/	47	33	0	/	/	/	89,97	0,33	0,66	0,60	0,01	4,22	4,52	36,33

	G	5	/	/	/	12	67	16	/	/	/	88,21	0,62	1,18	0,59	0,01	6,01	3,64	37,21
	H	20	/	/	/	47	0	33	/	/	/	86,57	0,18	1,37	0,70	0,01	8,77	3,09	36,37
	I	30	/	/	/	70	0	0	/	/	/	90,02	0,08	0,55	0,64	0,00	4,54	4,63	35,01
	J	0	/	/	/	0	33	67	/	/	/	83,08	0,52	2,31	0,72	0,02	12,68	1,43	41,89
	K	5	/	/	/	11	17	67	/	/	/	83,10	0,40	2,25	0,74	0,02	12,84	1,49	41,01
	L	0	/	/	/	0	0	100	/	/	/	79,68	0,37	3,02	0,82	0,02	17,23	0,00	50,46
	M	10	/	/	/	23	67	0	/	/	/	89,93	0,58	0,76	0,56	0,01	3,90	4,41	39,52
		Entomology code	Exotic fruits (%)	Pineapple (%)	Kiwifruit (%)	Apple (%)	Melon (%)	Peach (%)	Tomato (%)	Legume (%)	Corn (%)	Pomace (%)	Humidity (%)	Lipid (%)	Cru de protein (%)	Asn (%)	Polypheols (%)	Dietary fibre (%)	Non-structural carbohydrate (%)
Autumn group	A	4	/	/	/	8,5	/	/	12,5	62,5	12,5	60,37	1,23	8,51	1,06	0,01	26,47	2,40	62,88
	B	15	/	/	/	35	/	/	0	50	0	71,11	0,76	6,02	0,80	0,01	19,06	2,47	67,4
	C	0	/	/	/	0	/	/	0	100	0	52,20	1,44	11,49	0,97	0,01	33,59	0,30	51,47
	D	4	/	/	/	8,5	/	/	12,5	12,5	62,5	69,94	1,43	3,49	1,57	0,01	18,01	5,60	52,14
	E	4	/	/	/	8,5	/	/	62,5	12,5	12,5	64,59	0,86	7,09	1,11	0,01	20,99	5,41	60,95
	F	0	/	/	/	0	/	/	100	0	0	60,63	0,70	8,65	1,05	0,01	22,63	6,33	48,08
	G	0	/	/	/	0	/	/	50	0	50	65,98	1,28	5,05	1,52	0,01	19,64	6,52	55,75
	H	30	/	/	/	70	/	/	0	0	0	90,02	0,08	0,55	0,64	0,00	4,54	4,63	40,60
	I	0	/	/	/	0	/	/	50	50	0	56,42	1,07	10,07	1,01	0,01	28,11	3,32	54,33
	J	15	/	/	/	35	/	/	0	0	50	80,67	0,96	1,00	1,31	0,01	10,60	5,67	40,64
	K	19	/	/	/	43,5	/	/	12,5	12,5	12,5	79,28	0,55	3,04	0,90	0,01	11,95	4,56	55,55
	L	0	/	/	/	0	/	/	0	0	100	71,33	1,85	1,45	1,98	0,02	16,66	6,71	18,46
	M	0	/	/	/	0	/	/	0	50	50	61,76	1,64	6,47	1,47	0,01	25,13	3,51	58,68
	N	15	/	/	/	35	/	/	50	0	0	75,32	0,39	4,60	0,85	0,01	13,58	5,48	56,91
	O	7,5	/	/	/	17,5	/	/	25	25	25	68,54	1,02	5,53	1,16	0,01	19,35	4,49	65,64

Table S2: Complete amino acid composition (mg AA/g protein) of BSF prepupae grown on different diets

		mg AA/g protein																	
		ala	asp + asn	arg	gly	his	ile	leu	me t	phe	pro	ser	thr	val	lys	tyr	glu + gln	trp	cys
Code																			
ALL-YEAR GROUP	A	65 ± 6	113 ± 14	69 ± 8	60 ± 7	23 ± 16	42 ± ±2	67 ± ±2	19 ± ±1	42 ± 7	72 ± ±8	53 ± 2	41 ± ±0	60 ± ±2	60 ± 13	61 ± 14	124 ± 1	14 ± ±2	14 ± ±0
	B	62 ± 7	114 ± 16	71 ± 18	50 ± 0	33 ± 5	42 ± ±1	70 ± ±0	19 ± ±0	37 ± 5	73 ± ±5	48 ± 1	40 ± ±2	60 ± ±1	59 ± 8	56 ± 7	131 ± 18	18 ± ±1	18 ± ±0
	C	62 ± 2	92 ± 19	80 ± 7	57 ± 7	37 ± 13	43 ± ±2	69 ± ±4	19 ± ±0	48 ± 12	69 ± ±2	50 ± 3	41 ± ±3	60 ± ±1	59 ± 15	73 ± 16	108 ± 19	16 ± ±3	17 ± ±2
	D	63 ± 2	106 ± 2	72 ± 10	56 ± 0	30 ± 1	42 ± ±1	70 ± ±0	22 ± ±2	49 ± 0	68 ± ±4	49 ± 0	41 ± ±1	61 ± ±1	57 ± 8	69 ± 11	109 ± 8	17 ± ±0	17 ± ±1
	E	65 ± 3	118 ± 5	71 ± 12	51 ± 3	36 ± 5	41 ± ±2	69 ± ±1	17 ± ±1	38 ± 1	70 ± ±4	47 ± 2	39 ± ±4	59 ± ±3	61 ± 2	59 ± 3	126 ± 2	15 ± ±1	19 ± ±2
	F	65 ± 2	111 ± 9	70 ± 5	51 ± 1	35 ± 5	45 ± ±1	72 ± ±4	18 ± ±1	39 ± 2	72 ± ±1	49 ± 3	38 ± ±0	60 ± ±3	64 ± 8	58 ± 0	120 ± 0	14 ± ±0	17 ± ±2
	G	72 ± 12	107 ± 18	63 ± 2	54 ± 7	27 ± 4	46 ± ±5	75 ± ±9	17 ± ±0	40 ± 1	71 ± ±3	46 ± 6	36 ± ±8	66 ± ±4	70 ± 8	51 ± 10	128 ± 7	14 ± ±1	16 ± ±0
	H	61 ± 4	105 ± 6	78 ± 1	53 ± 2	33 ± 0	43 ± ±2	71 ± ±2	18 ± ±1	43 ± 1	69 ± ±3	50 ± 2	38 ± ±1	60 ± ±1	63 ± 1	61 ± 4	121 ± 4	15 ± ±1	19 ± ±3
	J	64 ± 3	103 ± 8	75 ± 3	54 ± 10	37 ± 2	43 ± ±2	72 ± ±1	18 ± ±5	42 ± 6	72 ± ±2	56 ± 7	38 ± ±0	60 ± ±3	59 ± 15	66 ± 13	117 ± 16	7 ± 1	16 ± ±2
	L	66 ± 3	115 ± 2	74 ± 4	54 ± 9	34 ± 5	39 ± ±3	71 ± ±3	16 ± ±1	35 ± 3	72 ± ±3	47 ± 2	35 ± ±2	59 ± ±5	64 ± 17	56 ± 9	128 ± 8	15 ± ±1	20 ± ±1
	N	67 ± 3	110 ± 5	73 ± 2	47 ± 1	31 ± 3	45 ± ±4	73 ± ±6	16 ± ±0	39 ± 5	71 ± ±1	47 ± 1	38 ± ±1	63 ± ±4	72 ± 3	53 ± 1	129 ± 14	12 ± ±2	16 ± ±4
	P	66 ± 2	109 ± 7	71 ± 7	50 ± 2	33 ± 3	44 ± ±1	71 ± ±0	20 ± ±1	42 ± 3	68 ± ±3	50 ± 0	42 ± ±2	63 ± ±1	60 ± 6	62 ± 1	116 ± 5	17 ± ±2	15 ± ±3
	Q	63 ± 3	106 ± 3	78 ± 6	50 ± 3	37 ± 5	43 ± ±1	73 ± ±3	21 ± ±1	41 ± 1	64 ± ±0	50 ± 2	40 ± ±0	60 ± ±0	60 ± 4	59 ± 3	118 ± 4	19 ± ±1	19 ± ±2
	R	64 ± 4	106 ± 3	77 ± 2	50 ± 3	33 ± 5	41 ± ±2	72 ± ±2	18 ± ±0	42 ± 2	68 ± ±4	49 ± 3	40 ± ±0	58 ± ±0	65 ± 2	63 ± 5	119 ± 1	15 ± ±1	21 ± ±3
	S	64 ± 4	108 ± 1	74 ± 5	51 ± 3	33 ± 0	42 ± ±1	71 ± ±3	17 ± ±2	42 ± 1	68 ± ±4	49 ± 3	40 ± ±1	59 ± ±2	61 ± 10	63 ± 1	119 ± 1	16 ± ±0	22 ± ±0
	T	65 ± 1	111 ± 6	73 ± 0	51 ± 2	35 ± 1	43 ± ±1	71 ± ±0	18 ± ±1	41 ± 2	64 ± ±1	48 ± 2	41 ± ±1	62 ± ±1	64 ± 8	63 ± 3	116 ± 7	14 ± ±0	20 ± ±3
	U	62 ± 2	100 ± 5	68 ± 2	50 ± 5	31 ± 3	44 ± ±0	73 ± ±2	19 ± ±2	45 ± 11	72 ± ±2	53 ± 3	42 ± ±1	61 ± ±1	61 ± 17	63 ± 15	125 ± 12	12 ± ±0	20 ± ±1
	V	61 ± 1	105 ± 9	79 ± 3	48 ± 1	38 ± 1	42 ± ±1	71 ± ±0	19 ± ±0	42 ± 1	67 ± ±4	51 ± 4	40 ± ±0	57 ± ±0	62 ± 3	60 ± 2	122 ± 7	16 ± ±2	19 ± ±1
	X	60 ± 2	101 ± 15	82 ± 6	51 ± 6	36 ± 2	44 ± ±3	72 ± ±1	19 ± ±1	47 ± 5	67 ± ±3	47 ± 2	39 ± ±0	61 ± ±4	55 ± 8	70 ± 11	110 ± 0	18 ± ±4	20 ± ±2
	Y	61 ± 6	105 ± 12	80 ± 1	49 ± 2	38 ± 7	44 ± ±1	72 ± ±1	18 ± ±2	42 ± 7	68 ± ±4	49 ± 2	40 ± ±2	61 ± ±1	62 ± 12	66 ± 9	114 ± 9	12 ± ±1	17 ± ±2
	Z	63 ± 4	104 ± 8	77 ± 6	48 ± 3	33 ± 5	43 ± ±3	72 ± ±0	18 ± ±0	38 ± 5	71 ± ±0	50 ± 4	39 ± ±5	60 ± ±4	69 ± 3	55 ± 7	125 ± 5	14 ± ±1	21 ± ±2
		ala	asp + asn	arg	gly	his	ile	leu	me t	phe	pro	ser	thr	val	lys	tyr	glu + gln	trp	cys
Entomo logy code																			
SUM	A	64 ± 3	96 ± 1	76 ± 6	48 ± 3	41 ± 2	44 ± ±1	75 ± ±1	18 ± ±1	42 ± 5	70 ± ±0	46 ± 2	36 ± ±2	59 ± ±2	66 ± 11	62 ± 4	118 ± 3	19 ± ±1	20 ± ±2

	B	67 ± 3	91 ± 3	77 ± 2	47 ± 1	41 ± 2	46 ± 0	84 ± 8	15 ± 2	38 ± 3	71 ± 4	44 ± 0	33 ± 1	60 ± 2	63 ± 4	61 ± 0	122 ± 1	17 ± 3	24 ± 5
	C	65 ± 2	97 ± 1	84 ± 2	47 ± 2	38 ± 0	44 ± 4	80 ± 1	17 ± 1	40 ± 3	68 ± 1	45 ± 0	35 ± 0	59 ± 1	66 ± 5	61 ± 5	115 ± 1	19 ± 5	22 ± 0
	D	62 ± 3	101 ± 5	73 ± 8	50 ± 3	41 ± 2	44 ± 2	79 ± 4	19 ± 1	40 ± 0	66 ± 2	45 ± 2	38 ± 5	60 ± 2	67 ± 9	61 ± 1	120 ± 2	15 ± 3	19 ± 3
	E	64 ± 2	103 ± 1	73 ± 1	47 ± 3	38 ± 0	43 ± 3	77 ± 2	18 ± 1	41 ± 0	70 ± 6	45 ± 3	38 ± 2	62 ± 2	64 ± 7	61 ± 2	122 ± 4	14 ± 0	19 ± 1
	F	66 ± 2	94 ± 1	73 ± 7	51 ± 2	46 ± 0	41 ± 1	75 ± 1	18 ± 0	42 ± 1	73 ± 2	47 ± 1	39 ± 1	57 ± 0	57 ± 2	64 ± 4	117 ± 6	16 ± 1	23 ± 2
	G	65 ± 3	94 ± 8	77 ± 5	52 ± 3	39 ± 3	41 ± 0	76 ± 1	17 ± 3	45 ± 7	71 ± 2	50 ± 2	40 ± 1	56 ± 2	54 ± 4	75 ± 12	114 ± 9	13 ± 1	22 ± 3
	H	66 ± 1	107 ± 4	75 ± 5	46 ± 3	31 ± 6	43 ± 1	76 ± 1	18 ± 1	39 ± 3	70 ± 2	46 ± 2	37 ± 0	58 ± 0	61 ± 12	62 ± 4	124 ± 2	17 ± 3	23 ± 2
	I	62 ± 2	100 ± 2	71 ± 8	45 ± 2	38 ± 8	41 ± 3	76 ± 3	18 ± 2	41 ± 3	69 ± 1	46 ± 4	40 ± 4	62 ± 2	67 ± 3	63 ± 0	127 ± 6	15 ± 3	19 ± 1
	J	57 ± 4	99 ± 6	75 ± 1	50 ± 0	32 ± 7	40 ± 3	81 ± 7	16 ± 1	36 ± 5	77 ± 8	47 ± 0	37 ± 4	64 ± 1	59 ± 5	62 ± 1	134 ± 4	16 ± 1	17 ± 2
	K	65 ± 0	99 ± 6	79 ± 10	49 ± 1	34 ± 3	44 ± 4	78 ± 0	19 ± 3	41 ± 2	68 ± 1	44 ± 1	36 ± 3	61 ± 3	61 ± 12	66 ± 3	122 ± 2	14 ± 2	21 ± 7
	L	65 ± 1	104 ± 4	66 ± 4	53 ± 2	36 ± 3	46 ± 2	76 ± 1	19 ± 3	37 ± 2	67 ± 2	41 ± 2	38 ± 0	66 ± 2	70 ± 1	64 ± 3	120 ± 0	14 ± 0	17 ± 0
	M	68 ± 3	104 ± 4	72 ± 3	47 ± 3	36 ± 3	43 ± 1	77 ± 4	17 ± 1	39 ± 4	71 ± 0	46 ± 4	37 ± 1	61 ± 1	64 ± 11	58 ± 11	124 ± 9	16 ± 2	20 ± 0
			ala	asp + asn	arg	gly	his	ile	leu	me t	phe	pro	ser	thr	val	lys	tyr	glu + gln	trp
	Entomo logy code																		
AUTUMN GROUP	A	64 ± 2	83 ± 1	82 ± 12	59 ± 4	41 ± 2	44 ± 2	83 ± 3	21 ± 2	51 ± 3	73 ± 2	50 ± 9	40 ± 8	66 ± 3	55 ± 7	76 ± 0	87 ± 2	19 ± 0	23 ± 1
	B	68 ± 3	91 ± 8	77 ± 3	61 ± 1	42 ± 5	44 ± 1	77 ± 3	20 ± 0	50 ± 1	74 ± 3	56 ± 2	42 ± 4	66 ± 2	47 ± 1	73 ± 2	90 ± 4	16 ± 2	21 ± 3
	C	64 ± 1	94 ± 3	77 ± 6	57 ± 2	38 ± 3	45 ± 0	81 ± 1	20 ± 2	48 ± 6	69 ± 5	58 ± 4	42 ± 5	68 ± 1	66 ± 8	68 ± 8	86 ± 1	14 ± 2	17 ± 1
	D	68 ± 2	79 ± 11	86 ± 10	61 ± 7	37 ± 1	44 ± 2	78 ± 5	20 ± 1	49 ± 5	81 ± 6	48 ± 8	37 ± 2	64 ± 3	47 ± 6	78 ± 5	97 ± 14	17 ± 0	24 ± 2
	E	66 ± 2	89 ± 4	78 ± 5	58 ± 6	39 ± 4	48 ± 2	81 ± 3	19 ± 1	48 ± 4	76 ± 3	55 ± 2	40 ± 2	67 ± 2	50 ± 11	71 ± 7	90 ± 1	13 ± 5	21 ± 0
	F	69 ± 3	95 ± 9	68 ± 6	55 ± 2	35 ± 2	48 ± 1	89 ± 3	19 ± 1	42 ± 1	69 ± 1	56 ± 5	43 ± 4	69 ± 2	63 ± 8	62 ± 4	96 ± 6	13 ± 1	15 ± 0
	G	62 ± 5	89 ± 5	75 ± 8	57 ± 4	38 ± 4	50 ± 1	79 ± 1	18 ± 2	44 ± 2	77 ± 4	51 ± 4	40 ± 2	67 ± 4	51 ± 4	69 ± 6	101 ± 10	15 ± 1	19 ± 2
	H	63 ± 2	95 ± 26	83 ± 13	55 ± 2	42 ± 2	42 ± 2	73 ± 1	20 ± 0	46 ± 1	72 ± 2	56 ± 11	37 ± 2	61 ± 1	54 ± 5	70 ± 3	102 ± 2	16 ± 1	21 ± 3
	I	68 ± 2	93 ± 2	73 ± 6	56 ± 1	40 ± 2	47 ± 1	84 ± 1	19 ± 1	46 ± 3	70 ± 0	55 ± 6	43 ± 1	67 ± 3	55 ± 6	67 ± 1	88 ± 2	15 ± 1	18 ± 0
	J	66 ± 4	85 ± 4	80 ± 3	55 ± 2	35 ± 1	43 ± 3	74 ± 1	18 ± 1	43 ± 2	79 ± 1	49 ± 3	35 ± 1	59 ± 2	60 ± 10	72 ± 1	113 ± 0	18 ± 1	23 ± 1
	K	76 ± 7	99 ± 2	70 ± 6	53 ± 1	37 ± 2	45 ± 2	79 ± 1	18 ± 0	43 ± 2	68 ± 1	53 ± 0	44 ± 8	66 ± 0	59 ± 7	60 ± 1	102 ± 6	15 ± 1	19 ± 1
	L	64 ± 5	76 ± 8	88 ± 7	55 ± 2	39 ± 2	42 ± 1	73 ± 1	19 ± 2	48 ± 5	81 ± 3	46 ± 1	38 ± 2	64 ± 2	51 ± 9	70 ± 6	107 ± 1	18 ± 0	26 ± 2
	M	65 ± 1	83 ± 16	73 ± 6	62 ± 6	40 ± 2	49 ± 4	86 ± 2	18 ± 2	46 ± 4	76 ± 4	55 ± 0	44 ± 3	72 ± 0	49 ± 9	71 ± 6	87 ± 11	14 ± 1	17 ± 0
	N	65 ± 3	85 ± 13	77 ± 11	57 ± 3	43 ± 7	43 ± 1	79 ± 5	19 ± 0	47 ± 3	73 ± 1	55 ± 5	42 ± 6	67 ± 1	56 ± 5	69 ± 1	92 ± 3	16 ± 2	20 ± 1
	O	68 ± 2	89 ± 11	73 ± 5	58 ± 4	40 ± 3	46 ± 1	80 ± 2	18 ± 1	47 ± 1	74 ± 2	54 ± 4	42 ± 1	69 ± 0	51 ± 1	68 ± 2	88 ± 1	17 ± 2	18 ± 1

		ala	asp + asn	arg	gly	his	ile	leu	me t	phe	pro	ser	thr	val	lys	tyr	glu + gln	trp	cys
CONTROL	Entomo logy code																		
	CTR	66 ± 2	99 ± 9	77 ± 9	51 ± 1	37 ± 1	44 ± 2	74 ± 4	18 ± 0	43 ± 3	69 ± 0	47 ± 2	39 ± 0	62 ± 3	62 ± 6	64 ± 3	109 ± 5	18 ± 2	21 ± 3

Table S3: PCA loadings.

	PC1	PC2	PC3	PC4	PC5
glu	-0,94	-0,14	-0,01	-0,20	0,04
lys	-0,90	0,16	0,08	0,19	-0,13
phe	0,86	-0,08	-0,34	0,08	0,03
asp	-0,84	0,33	-0,30	0,05	0,09
tyr	0,82	-0,31	-0,23	-0,07	-0,11
gly	0,80	0,23	-0,18	-0,30	0,26
val	0,67	0,53	0,30	0,02	0,07
ser	0,62	0,46	-0,30	-0,17	-0,19
his	0,52	-0,36	0,23	0,31	-0,48
cys	0,22	-0,82	0,22	0,08	0,06
arg	0,38	-0,76	-0,16	-0,01	-0,13
thr	0,43	0,62	-0,39	0,22	-0,14
trp	0,14	-0,53	0,00	0,47	0,50
leu	0,54	0,15	0,67	0,15	-0,22
met	0,54	0,05	-0,60	0,33	0,23
ile	0,47	0,45	0,50	0,15	0,03
pro	0,50	-0,24	0,25	-0,70	0,20
ala	0,17	0,30	0,48	0,18	0,50

Table S4. Summary of ANOVA results.

Response	Transformation	Significant factors other than linear factors	R ²	Pred R ²
his	None	Ashes*Fibres*Carbohydrates Ashes*Fibres Ashes*Carbohydrates Fibres*Carbohydrates = 115,1251 * Lipids + 142,8697 * Ashes + 38,8390 * Fibres - 1685,9516 * Polyphenols + 43,4625 * Proteins + 39,3171 * Carbohydrates -250,6740 * Ashes * Fibres -272,3182 * Ashes * Carbohydrates - 9,7396 * Fibres * Carbohydrates + 506,4663 * Ashes * Fibres * Carbohydrates	0.39	0.25
ile	None	Ashes* Proteins = 74,8870 * Lipids - 40,7818 *Ashes + 43,3120 * Fibres -1796,7832 * Polyphenols+ 37,9499 * Proteins + 46,5295 * Carbohydrates + 972,5378 *Ashes * Proteins	0.42	0.34
leu	Power (k=2.5)	None = 138,8949 * Lipids + 56,4144 * Ashes + 67,6174 * Fibres + 1404,0497 * Polyphenols + 128,6415 * Proteins + 68,7274 * Carbohydrates	0.76	0.73
met	None	None = -0,1543 * Lipids + 8,1371 * Ashes + 22,8876 * Fibres -1975,3666 * Polyphenols + 15,3176 * Proteins + 19,1364 * Carbohydrates	0.38	0.30
phe	None	Lipids*Fibres = -40,2706 * Lipids + 20,9231 * Ashes + 44,2497 * Fibres - 8333,6909 * Polyphenols + 51,8682 * Proteins + 46,1981 * Carbohydrates + 371,7611 * Lipids * Fibres	0.51	0.44
thr	None	None = 20,2967 * Lipids + 29,0736 * Ashes + 39,5218 * Fibres -3503,6628 * Polyphenols + 59,5214 * Proteins + 40,8414 * Carbohydrates	0.47	0.41
val	None	Lipids * Carbohydrates Polyphenols * Proteins = 207,4451 * Lipids + 38,1122 * Ashes + 60,6184 * Fibres -11825,8780 * Polyphenols + 74,0273 * Proteins + 66,4548 * Carbohydrates -304,7381 * Lipids * Carbohydrates + 75299,2771 *Polyphenols * Proteins	0.68	0.62
lys	Power (k=2.5)	Lipids * Ashes * Polyphenols Lipids * Ashes Lipids * Polyphenols Lipids * Carbohydrates Ashes * Polyphenols	0.63	0.52

-789,5534 * Lipids + 67,3562 * Ashes + 63,5633 * Fibres + 5323,1377 * Polyphenols +
65,4436 * Proteins + 56,3629 * Carbohydrates + 3172,7599 * Lipids * Ashes + 244403,0963
* Lipids * Polyphenols - 455,9764 * Lipids * Carbohydrates + 18499,4861 * Ashes *
Polyphenols + 4911650,4178 * Lipids * Ashes * Polyphenols

None	Polyphenols * Proteins	0.19	0.08
------	------------------------	------	------

trp

= 21,8816 * Lipids + 11,1148 * Ashes + 16,4850 * Fibres + 7629,3982 * Polyphenols +
23,4770 * Proteins + 11,7696 * Carbohydrates -71645,1372 * Polyphenols * Proteins
