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Treatments	Food waste		Tofu by-product		SEM	P-value		
	Larvae	Prepupae	Larvae	Prepupae		SUB	STG	SUB×STG
DM, %	40.60	42.73	41.57	42.97	0.689	0.662	0.207	0.792
GE, kcal	4,315	4,343	4,388	4,410	30.0	0.253	0.684	0.964
CP, % of DM	39.12	41.66	41.63	43.41	0.326	0.002	0.002	0.569
EE, % of DM	35.53	36.67	35.76	37.02	0.283	0.617	0.041	0.920
Ash, % of DM	7.04	7.24	7.10	7.29	0.167	0.872	0.564	0.916
Chitin, % of DM	7.85	8.45	8.15	8.60	0.125	0.257	0.049	0.882

378 SEM, standard error of mean; DM, dry matter; GE, gross energy; EE, ether extract. Each value is the  
 379 average of 10 replicates.

380

Table 4. Effects of substrate (SUB) and development stage (STG) on amino acid profile of black soldier fly.

Treatments	Food waste		Tofu by-product		SEM	P-value		
	Larvae	Prepupae	Larvae	Prepupae		SUB	STG	SUB×STG
Essential amino acid, %								
Arginine	1.86	1.95	1.74	1.93	0.036	0.361	0.061	0.520
Histidine	1.06	1.07	1.19	1.11	0.028	0.296	0.062	0.710
Isoleucine	1.45	1.16	1.66	1.83	0.031	0.002	0.016	0.958
Leucine	2.39	2.44	2.53	2.68	0.030	0.005	0.114	0.426
Lysine	2.81	2.92	2.84	2.93	0.062	0.836	0.423	0.931
Methionine	0.59	0.64	0.54	0.58	0.020	0.219	0.321	0.951
Phenylalanine	1.07	1.21	1.14	1.23	0.033	0.109	0.164	0.459
Threonine	1.36	1.48	1.38	1.58	0.022	0.205	0.002	0.400
Tryptophan	1.97	2.21	2.23	2.32	0.030	0.007	0.015	0.243
Valine	2.53	2.58	2.59	2.74	0.076	0.479	0.513	0.716
Non-essential amino acid, %								
Alanine	2.46	2.56	2.63	2.77	0.029	0.004	0.049	0.680
Aspartate	3.16	3.49	3.34	3.46	0.056	0.522	0.054	0.355
Cysteine	0.26	0.28	0.31	0.32	0.018	0.177	0.747	0.927
Glutamate	3.92	4.02	3.82	4.01	0.175	0.863	0.684	0.893
Glycine	1.93	2.06	2.11	2.13	0.031	0.062	0.243	0.335
Proline	2.50	2.64	2.72	2.73	0.026	0.006	0.183	0.203
Serine	1.37	1.58	1.42	1.55	0.025	0.894	0.002	0.449
Tyrosine	1.97	2.23	2.14	2.25	0.024	0.070	0.001	0.117

381 SEM, standard error of mean. Each value is the average of 10 replicates.

382

Table 5. Effects of substrate (SUB) and development stage (STG) on fatty acid composition of black soldier fly.

Treatments	Food waste		Tofu by-product		SEM	P-value		
	Larvae	Prepupae	Larvae	Prepupae		SUB	STG	SUB×STG
Fatty acid, %								
C10:0	0.88	0.91	0.94	0.97	0.009	0.006	0.160	0.827
C12:0	22.22	23.28	23.72	24.90	0.174	<0.001	0.004	0.871
C14:0	4.38	4.63	4.71	4.68	0.042	0.035	0.238	0.111
C14:1	0.12	0.10	0.16	0.15	0.010	0.032	0.437	0.814
C15:0	0.14	0.16	0.16	0.20	0.008	0.051	0.033	0.454
C16:0	15.43	16.36	14.64	14.35	0.335	0.050	0.641	0.373
C16:1	3.25	3.31	3.29	3.25	0.017	0.882	0.730	0.125
C:17:0	0.22	0.26	0.19	0.23	0.007	0.065	0.015	0.861
C18:0	1.90	2.27	2.03	2.14	0.045	0.985	0.016	0.160
C18:1	24.10	23.41	23.89	23.06	0.268	0.607	0.174	0.893
C18:2n6	19.25	17.04	17.86	17.51	0.328	0.496	0.065	0.170
C18:3n3	2.16	2.11	2.23	2.25	0.022	0.036	0.811	0.392
C18:4	0.90	0.91	0.70	0.74	0.007	<0.001	0.105	0.527
C20:1	0.24	0.27	0.45	0.47	0.010	<0.001	0.345	0.811
C20:4n6	0.26	0.21	0.22	0.21	0.009	0.290	0.067	0.252
C20:5n3	1.36	1.28	1.23	1.31	0.017	0.121	0.980	0.028
Other	2.01	2.14	2.35	2.30	0.049	0.016	0.685	0.374
SFA	45.17	47.86	46.39	47.46	0.400	0.612	0.030	0.325
USFA	53.64	50.77	52.38	51.25	0.417	0.647	0.026	0.311