Table S1. yw Strain Female Diet Response Surfaces Raw Data

	Yeast g·dl^{-1}	2.5 g·dl^{-1} Sugar			5 g·dl^{-1} Sugar			10 g·dl^{-1} Sugar			20 g·dl^{-1} Sugar			40 g·dl^{-1} Sugar		
		mean	**s.e.**	**n**	**mean**	**s.e.**	**n**	**mean**	**s.e.**	**n**	**mean**	**s.e.**	**n**	**mean**	**s.e.**	**n**
TAG/fly (ug)	40	8.0	0.82	13	12.8	1.25	16	14.7	1.49	13	19.1	1.01	14	28.9	2.37	8
	20	11.2	0.89	16	13.2	1.11	17	17.1	1.97	15	33.5	2.28	13	46.9	2.28	16
	10	12.4	1.12	14	15.7	1.37	16	29.6	1.63	15	53.9	2.72	15	64.5	3.92	10
	5	15.6	1.41	16	19.0	1.84	16	30.9	1.38	16	47.0	2.30	12	62.5	4.63	10
	2.5	19.4	1.41	15	25.0	1.36	16	37.8	2.01	16	39.6	2.15	16	44.9	4.58	10
Prot./fly (µg)	40	93.1	3.64	13	95.1	2.57	16	94.9	1.86	13	96.2	2.00	14	100.0	1.19	8
	20	91.0	0.82	16	87.2	2.29	17	80.8	2.05	15	82.1	1.88	13	87.5	1.40	16
	10	94.8	3.50	14	73.5	2.26	16	63.6	1.62	15	71.2	1.84	15	65.9	1.91	10
	5	84.9	2.42	16	60.2	1.91	16	49.8	1.39	16	50.2	1.35	12	56.9	2.47	10
	2.5	75.5	1.58	15	54.6	2.21	16	52.1	1.61	16	48.2	1.58	16	55.8	4.87	10
(TAG/ Prot.)	40	0.09	0.01	13	0.13	0.01	16	0.70	0.02	13	0.20	0.01	14	0.29	0.02	8
	20	0.12	0.01	16	0.15	0.01	17	1.15	0.02	15	0.41	0.03	13	0.54	0.03	16
	10	0.13	0.01	14	0.22	0.02	16	1.95	0.03	15	0.77	0.05	15	0.98	0.05	10
	5	0.18	0.02	16	0.32	0.03	16	2.31	0.03	16	0.94	0.03	12	1.11	0.08	10
	2.5	0.26	0.02	15	0.48	0.05	16	2.45	0.03	16	0.83	0.04	16	0.87	0.10	10
Lifespan (days)	40	43.0	0.90	233	48.4	1.00	229	42.2	0.80	203	43.4	0.80	208	35.9	0.70	239
	20	50.1	1.00	228	49.1	0.90	250	53.3	0.90	249	55.7	1.00	266	44.3	0.90	259
	10	51.0	0.90	272	52.6	0.90	259	54.7	0.90	261	54.7	0.90	271	43.8	0.90	263
	5	51.8	0.90	264	54.3	0.90	250	55.4	0.80	248	55.4	0.80	261	40.9	0.80	267
	2.5	51.7	0.90	259	50.3	0.90	266	49.9	0.90	266	49.9	0.80	269	36.1	0.80	271
#Eggs/fly	40	324.2	2.02	4	364.3	1.85	4	287.5	1.63	4	222.4	1.37	4	80.2	0.98	4
	20	136.4	0.70	4	123.3	0.58	4	88.6	0.85	4	59.1	0.56	4	101.6	0.79	4
	10	50.0	0.38	4	27.6	0.51	4	25.7	0.31	4	38.0	0.67	4	48.1	0.75	4
	5	25.9	0.40	4	32.4	0.60	4	31.9	0.63	4	36.9	0.78	4	44.2	0.84	4
	2.5	34.2	0.60	4	36.5	0.88	4	25.2	0.64	4	33.1	0.80	4	39.3	0.89	4
Food/fly /6hr (µg)	40	22.7	3.94	13	20.2	5.53	16	39.5	2.21	13	41.4	2.14	14	41.1	5.88	8
	20	19.6	2.28	16	28.0	4.55	17	49.4	2.01	15	55.2	2.07	13	40.8	2.66	16
	10	27.1	1.91	14	20.3	1.79	16	67.9	5.16	15	40.6	1.58	15	56.8	3.00	10
	5	32.1	2.14	16	39.4	3.17	16	46.1	2.09	16	53.2	3.03	12	65.8	2.32	10
	2.5	71.3	3.45	15	59.2	2.57	16	62.8	1.31	16	68.9	2.23	16	73.9	3.35	10
calories/ fly/6hr	40	2.7E-02	4.1E-03	13	2.5E-02	3.2E-03	16	5.3E-02	1.8E-03	13	6.2E-02	3.4E-03	14	7.3E-02	6.0E-03	8
	20	1.4E-02	1.6E-03	16	2.2E-02	2.5E-03	17	4.6E-02	1.9E-03	15	6.3E-02	3.5E-03	13	6.1E-02	3.5E-03	16
	10	1.2E-02	8.5E-04	14	1.1E-02	9.4E-04	16	4.5E-02	3.4E-03	15	3.8E-02	1.5E-03	15	7.6E-02	4.0E-03	10
	5	9.0E-03	6.4E-04	16	1.4E-02	1.7E-03	16	2.4E-02	1.0E-03	16	4.3E-02	1.7E-03	12	8.2E-02	3.3E-03	10
	2.5	1.4E-02	7.5E-04	15	1.7E-02	1.5E-03	16	2.8E-02	9.8E-04	16	5.1E-02	1.6E-03	16	8.8E-02	7.0E-03	10

Summary of mean and standard error values obtained during 25 nutritional treatments of adult female, yw strain flies. Triglycerides (TAG) per fly, protein (Prot.) per fly, scaled triglycerides (TAG/Prot.), fecundity and food consumption data are representative of at least 2 independent trials. n represents the number of replicates per treatment, each replicate containing 5 flies (TAG, Prot., Food), 20 flies (Eggs), or 1 animal (Lifespan).