

Table S5. CantonS Strain Females 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 (µg) | 40 | 30.4 | 1.29 | 14 | 30.0 | 1.78 | 14 | 41.6 | 1.55 | 15 | 55.1 | 1.98 | 16 | 71.5 | 3.15 | 15 |
| | 20 | 31.3 | 1.47 | 15 | 31.5 | 2.13 | 13 | 33.7 | 2.55 | 13 | 54.5 | 3.00 | 15 | 66.3 | 3.47 | 15 |
| | 10 | 30.9 | 1.44 | 15 | 27.3 | 1.96 | 15 | 43.9 | 2.34 | 15 | 58.7 | 2.55 | 16 | 50.6 | 3.47 | 16 |
| | 5 | 24.7 | 1.11 | 16 | 29.0 | 2.11 | 15 | 31.5 | 2.28 | 15 | 46.1 | 2.20 | 15 | 53.7 | 2.77 | 16 |
| | 2.5 | 26.0 | 1.59 | 16 | 22.3 | 1.16 | 16 | 27.8 | 1.85 | 15 | 40.8 | 3.11 | 15 | 36.3 | 3.28 | 15 |
| Prot./fly (µg) | 40 | 142.5 | 5.19 | 14 | 138.9 | 4.90 | 14 | 151.5 | 3.69 | 15 | 166.3 | 8.13 | 16 | 140.3 | 2.73 | 15 |
| | 20 | 131.2 | 8.07 | 15 | 132.2 | 7.50 | 13 | 125.8 | 4.42 | 13 | 121.9 | 3.52 | 15 | 106.0 | 4.10 | 15 |
| | 10 | 114.2 | 3.50 | 15 | 100.9 | 5.90 | 15 | 93.2 | 4.19 | 15 | 106.1 | 4.62 | 16 | 127.2 | 11.15 | 16 |
| | 5 | 87.5 | 5.45 | 16 | 77.8 | 4.45 | 15 | 64.6 | 3.97 | 15 | 83.8 | 4.40 | 15 | 81.6 | 3.71 | 16 |
| | 2.5 | 76.7 | 5.21 | 16 | 77.6 | 3.83 | 16 | 59.1 | 4.15 | 15 | 87.3 | 4.56 | 15 | 78.3 | 3.60 | 15 |
| (TAG/ Prot.) | 40 | 0.22 | 0.01 | 14 | 0.22 | 0.01 | 14 | 0.28 | 0.01 | 15 | 0.35 | 0.03 | 16 | 0.51 | 0.02 | 15 |
| | 20 | 0.25 | 0.02 | 15 | 0.24 | 0.02 | 13 | 0.27 | 0.02 | 13 | 0.45 | 0.03 | 15 | 0.64 | 0.05 | 15 |
| | 10 | 0.27 | 0.01 | 15 | 0.27 | 0.01 | 15 | 0.48 | 0.03 | 15 | 0.57 | 0.04 | 16 | 0.46 | 0.06 | 16 |
| | 5 | 0.30 | 0.02 | 16 | 0.38 | 0.02 | 15 | 0.49 | 0.03 | 15 | 0.58 | 0.05 | 15 | 0.68 | 0.04 | 16 |
| | 2.5 | 0.35 | 0.02 | 16 | 0.30 | 0.02 | 16 | 0.49 | 0.04 | 15 | 0.49 | 0.05 | 15 | 0.49 | 0.06 | 15 |
| Lifespan (days) | 40 | 54.0 | 1.67 | 74 | 56.3 | 1.16 | 121 | 53.1 | 1.23 | 125 | 52.1 | 1.02 | 124 | 38.5 | 0.92 | 125 |
| | 20 | 64.1 | 0.84 | 120 | 64.2 | 1.02 | 125 | 62.2 | 1.15 | 124 | 62.2 | 0.88 | 123 | 51.2 | 1.29 | 123 |
| | 10 | 64.6 | 1.17 | 127 | 67.6 | 1.00 | 124 | 67.0 | 1.39 | 120 | 65.9 | 1.00 | 117 | 59.2 | 1.19 | 124 |
| | 5 | 68.5 | 1.13 | 111 | 69.4 | 0.89 | 117 | 68.5 | 1.31 | 113 | 63.1 | 1.40 | 117 | 58.8 | 1.09 | 121 |
| | 2.5 | 63.4 | 1.59 | 113 | 55.6 | 1.53 | 117 | 55.5 | 1.38 | 128 | 40.8 | 0.87 | 122 | 36.5 | 0.58 | 122 |
| Food/fly /6hr (µg) | 40 | 14.8 | 5.9 | 7 | 7.9 | 5.2 | 9 | 5.4 | 1.9 | 8 | 27.5 | 3.4 | 8 | 33.8 | 8.1 | 7 |
| | 20 | 22.4 | 4.8 | 8 | 2.7 | 3.4 | 10 | 12.1 | 2.9 | 9 | 43.3 | 4.7 | 9 | 25.2 | 2.8 | 8 |
| | 10 | 13.1 | 2.5 | 9 | 3.1 | 2.3 | 9 | 8.3 | 1.8 | 9 | 25.7 | 2.4 | 9 | 23.6 | 3.1 | 9 |
| | 5 | 45.7 | 4.2 | 7 | 38.2 | 3.7 | 9 | 48.5 | 3.6 | 9 | 40.5 | 4.3 | 7 | 52.1 | 2.8 | 9 |
| | 2.5 | 121.4 | 5.6 | 10 | 86.2 | 7.3 | 8 | 87.8 | 2.4 | 9 | 61.2 | 4.2 | 7 | 59.2 | 4.4 | 7 |
| calories /fly/6hr | 40 | 1.8E-02 | 7.0E-03 | 7 | 9.9E-03 | 6.4E-03 | 9 | 7.3E-03 | 2.5E-03 | 8 | 4.1E-02 | 5.2E-03 | 8 | 6.0E-02 | 1.4E-02 | 7 |
| | 20 | 1.7E-02 | 3.5E-03 | 8 | 2.2E-03 | 2.7E-03 | 10 | 1.1E-02 | 2.7E-03 | 9 | 5.0E-02 | 5.4E-03 | 9 | 3.8E-02 | 4.2E-03 | 8 |
| | 10 | 5.8E-03 | 1.1E-03 | 9 | 1.6E-03 | 1.2E-03 | 9 | 5.6E-03 | 1.2E-03 | 9 | 2.4E-02 | 2.2E-03 | 9 | 3.1E-02 | 4.2E-03 | 9 |
| | 5 | 1.3E-02 | 1.2E-03 | 7 | 1.4E-02 | 1.3E-03 | 9 | 2.5E-02 | 1.9E-03 | 9 | 3.2E-02 | 3.4E-03 | 7 | 6.5E-02 | 3.5E-03 | 9 |
| | 2.5 | 2.3E-02 | 1.1E-03 | 10 | 2.4E-02 | 2.0E-03 | 8 | 3.9E-02 | 1.1E-03 | 9 | 4.5E-02 | 3.1E-03 | 7 | 7.1E-02 | 5.2E-03 | 7 |

Summary of mean and standard error values obtained during 25 nutritional treatments of adult female, CantonS strain flies. Triglycerides (TAG) per fly, protein (Prot.) per fly, scaled triglycerides (TAG/Prot.), 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.