**Dialog S1**

**Moatt et al. Data\_S1 – Data File for Body Composition and Testes Mass.**

**FID *–*** Unique ID for each individual.

**TankID** – Unique identifier for individual in each tank (L = large individual, M = medium, S = small).

**Sex** – Sex of the individual (M= male, F = female).

**Diet** – Dietary treatment (1 = *10.2:1*, 2 = *4.6:1*, 3 = *2.5:1*, 4 = *8.5:1*, 5 = *1.6:1*).

**P** – Protein content of the diet (%)

**L** – Lipid content of the diet (%).

**E –** Energycontent of the diet (MJKg-1).

**P\_L –** Ratio of protein to lipid in the diet.

**Tank –** Home tank of the individual.

**Family –** Unique clutch ID, each ID represents a unique sire and dam.

**Wet\_wt –** Final wet weight of fish (g).

**Dry\_wt –** Weight of dried carcass (g).

**Fat\_free\_wt –** Fat free weight of sample (g).

**Ashed\_wt –** Ashed weight of sample (g).

**Fat –** Amount of fat in sample (g).

**Protein –** Amount of protein in sample (g).

**Pwater –** Water content of sample (%).

**Pfat –** Percentage of fat in sample.

**Pash –** Percentage of ash in sample

**Pprotein –** Percentage of protein in sample.

**Energy\_fat –** Energy from fat in sample (KJg-1).

**Energy\_protein –** Energy from protein in sample (KJg-1).

**Total\_energy –** Total energy in sample (KJg-1).

**P\_F –** Ratio of protein : fat in sample.

**Diff\_P\_F –** difference in protein : lipid ratio between diet and sample.

**Testes\_wt –** Weight of testes (g).

**Wt\_body –** Body weight at time of testes dissection (g).

**Moatt et al. Data\_S2 – Data File for Growth.**

**FID *–*** Unique ID for each individual fish.

**Batch** – Batch of weighing events (1 = prior to start of dietary manipulations, 5 = time of death).

**Date** – Date of weighing batch.

**Days** – Number of days of dietary treatment.

**Wt** – Weight of fish.

**Ln** – Length of fish.

**Diet** – Dietary treatment fish (1 = *10.2:1*, 2 = *4.6:1*, 3 = *2.5:1*, 4 = *8.5:1*, 5 = *1.6:1*).

**Sex** – Sex of the individual (M= male, F = female).

**Tank –** Home tank of the individual.

**Family –** Unique clutch ID, each ID represents a unique sire and dam.

**Moatt et al. Data\_S3 – Data File for Activity.**

**FID *–*** Unique ID for each individual fish.

**Sex** – Sex of the individual (M= male, F = female).

**Tank –** Home tank of the individual.

**Wt** – Weight of fish.

**Ln** – Length of fish.

**Diet** – Dietary treatment (1 = *10.2:1*, 2 = *4.6:1*, 3 = *2.5:1*, 4 = *8.5:1*, 5 = *1.6:1*).

**Family –** Unique clutch ID, each ID represents a unique sire and dam.

**Act –** Activity (time spent moving).

**Moatt et al. Data\_S4 – Data File for Swimming Endurance.**

**FID *–*** Unique ID for each individual fish.

**Diet** – Dietary treatment fish (1 = *10.2:1*, 2 = *4.6:1*, 3 = *2.5:1*, 4 = *8.5:1*, 5 = *1.6:1*).

**Sex** – Sex of the individual (M= male, F = female).

**Tank –** Home tank of the individual.

**Family –** Unique clutch ID, each ID represents a unique sire and dam.

**Swim\_time –** Time spent swimming at high current (s).

**Wt –** Weight at time of swimming trial (g).

**Ln –** Length at time of swimming trial (g).

**Date –** Date of swim trial.

**Temp –** Average daily temperature for day of trial (oC).