



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of Agriculture and Food

LUANN ADAMS
Commissioner

SCOTT ERICKSEN
Deputy Commissioner

CODY JAMES
Director of Animal Industry Division

BARRY PITTMAN, DVM
State Veterinarian

14 December 2017

Neal Barker, Owner
Cold Springs Trout Farm
2284 N. Fruitland Dr.
N. Ogden, Utah 84414

Subject: Cold Springs Trout Farm fish health approval (Log No. 17-420)

Dear Neal,

You requested the Utah Department of Agriculture and Food (UDAF) collect tissue samples from Cold Springs Trout Farm on 13-14 November 2017 and ship them to Washington Animal Disease Diagnostic Lab (WADDL) for health certification. I received fish health inspection report from WADDL and have assigned fish health approval number FHA174201117UT to Cold Springs Trout Farm. This number is valid for the sale of diploid and sterile rainbow, brown and brook trout, and tiger trout through 14 January 2018. Laboratory test results are attached.

Blood samples were also collected from rainbow trout, brook trout and brown on 8 August 2017 and sent to the University of Washington Pathology Lab to verify triploidy. Cold Spring Trout Farm achieved 100% sterility for lot # 1tripbrn2016 of brown trout; 100% sterility for lot # 1tripbk2016 of brook trout and 96% for lot 1triprbt2016 of rainbow trout. Laboratory results are attached.

An aquatic invasive species (AIS) inspection was conducted at Cold Spring Trout Farm on November 14, 2017. No New Zealand Mudsnailes, Quagga Mussels or Zebra Mussels were found on the premises.

Thank you for your valuable assistance with the licensing process.

Please call (801) 538-7046 if you have any questions or if I can be of further assistance.

Best regards,

Anna Marie Forest, Manager
Fish Health Program
Utah Department of Agriculture and Food

Laboratory Results Report

WADDL Number 2017-14808

| | | | | | | | | | | | | | | | | |
|---|--|----------------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Fish source Anna Forest Utah Department of Agriculture & Food | | | Address or location of fish source Cold Springs Trout Farm 2284 North Fruitland Drive North Ogden, UT 84414 | | | | | | | | | | | | | |
| Fish sampled | | Sample Date 14 Nov 2017 | | Pathogens detected properties consistent with ¹ | | | | | | | | | | | | |
| Species | | Age | Sample size ^{2,3,4,5,6} | E | I | I | O | S | V | I | A | Y | R | C | M | L |
| | | | | H | H | P | M | V | H | S | S | E | E | M | Y | M |
| | | | | N | N | N | V | C | S | A | L | R | N | S | X | B |
| | | | | | | | | | | | | | | | | |
| <i>Oncorhynchus mykiss</i> Lot 8 | | 0-3 mos. | 60 k/v/ms/wf | - | - | - | - | - | - | | | | | | | |
| <i>Salvelinus fontinalis</i> Lot 1 | | 2-4 yrs. | 60 ov | - | - | - | - | - | - | | | | | | | |
| <i>Salmo trutta</i> Lot 2 | | 2-4 yrs. | 60 ov | - | - | - | - | - | - | | | | | | | |
| <i>Oncorhynchus mykiss</i> Lot 3 | | 2-4 yrs. | 60 ov | - | - | - | - | - | - | | | | | | | |

¹EHN - Epizootic Hematopoietic Necrosis Virus
¹IHN - Infectious Hematopoietic Necrosis Virus
¹IPN - Infectious Pancreatic Necrosis Virus
¹OMV - *Oncorhynchus masou* virus
¹SVC - Spring Viremia of Carp
¹VHS - Viral Hemorrhagic Septicemia Virus
¹ISA - Infectious Salmon Anemia Virus

ASL - *Aeromonas salmonicida*
YER - *Yersinia ruckeri*
REN - *Renibacterium salmoninarum*
CMS - *Ceratomyxa shasta*
MYX - *Myxobolus cerebralis*
PRS - *Piscirickettsia salmonis*
LMBV - Largemouth Bass Virus

²c = culture media

³k/v/ms/wf = kidney/viscera/mid-section/whole fish

⁴h = heads

⁵wf = whole fish

⁶ov = ovarian fluid

* See summary

+ Agent detected, properties consistent with

- Agent not detected

O No test performed

Laboratory findings summary:

Utah Dept. of Ag. Log No. 17-396.

No significant pathogens were detected.

Fish at the above facility were inspected in accordance with procedures outlined in the USFWS and AFS-FHS, Standard Procedures for Aquatic Animal Health Inspections. In: Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens. Blue Book 2016 Edition, Fish Health Section, AFS.

Laboratory official's signature Jim B. Thompson
Jim B. Thompson, AFS Fish Health Inspector #106

Date 14 December 2017

Laboratory Results Report

WADDL Number 2017-14725

| Fish source Anna Forest Utah Department of Agriculture & Food | | | Address or location of fish source Cold Springs Trout Farm 2284 North Fruitland Drive North Ogden, UT 84414 | | | | | | | | | | | | | |
|---|-------|----------------------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|--|
| Fish sampled | | Sample Date 13 Nov 2017 | | Pathogens detected properties consistent with ¹ | | | | | | | | | | | | |
| Species | Age | Sample size ^{2,3,4,5,6} | E | I | I | O | S | V | I | A | Y | R | C | M | L | |
| | | | H | H | P | M | V | H | S | S | E | E | M | Y | M | |
| | | | N | N | N | V | C | S | A | L | R | N | S | X | B | |
| | | | | | | | | | | | | | | | | |
| <i>Salvelinus fontinalis</i> | Lot 4 | 10 mos. | 60 k/s | - | - | - | - | - | - | | | | | | | |
| | | | 60 k | | | | | | | | | - | | | | |
| <i>Salmo trutta</i> | Lot 5 | 10 mos. | 60 k/s | - | - | - | - | - | - | | | | | | | |
| <i>Oncorhynchus mykiss</i> | Lot 6 | 10 mos. | 60 k/s | - | - | - | - | - | - | | | | | | | |
| | | | 60 c | | | | | | | - | - | | | | | |
| | | | 60 h | | | | | | | | | | | - | | |
| <i>S. trutta X S. fontinalis</i> | Lot 7 | 10 mos. | 60 k/s | - | - | - | - | - | - | | | | | | | |

¹EHN - Epizootic Hematopoietic Necrosis Virus
¹IHN - Infectious Hematopoietic Necrosis Virus
¹IPN - Infectious Pancreatic Necrosis Virus
¹OMV - *Oncorhynchus masou* virus
¹SVC - Spring Viremia of Carp
¹VHS - Viral Hemorrhagic Septicemia Virus
¹ISA - Infectious Salmon Anemia Virus

ASL - *Aeromonas salmonicida*
YER - *Yersinia ruckeri*
REN - *Renibacterium salmoninarum*
CMS - *Ceratomyxa shasta*
MYX - *Myxobolus cerebralis*
PRS - *Piscirickettsia salmonis*
LMBV - Largemouth Bass Virus

²c = culture media
³k/s = kidney/spleen
⁴h = heads
⁵wf = whole fish
⁶ov = ovarian fluid

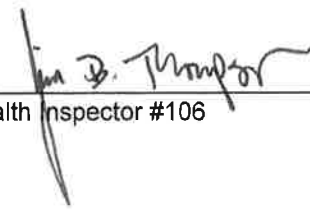
* See summary
+ Agent detected, properties consistent with
- Agent not detected
O No test performed

Laboratory findings summary:

Utah Dept. of Ag. Log No. 17-396.

No significant pathogens were detected.

Fish at the above facility were inspected in accordance with procedures outlined in the USFWS and AFS-FHS, Standard Procedures for Aquatic Animal Health Inspections. In: Suggested Procedures for the Detection and Identification of Certain Finfish and Shellfish Pathogens. Blue Book 2016 Edition, Fish Health Section, AFS.

Laboratory official's signature  Date 13 December 2017
Jim B. Thompson, AFS Fish Health Inspector #106

Washington Animal Disease Diagnostic Lab

P.O. Box 647034
Pullman, WA 99164-7034
Telephone : (509) 335-9696
Fax : (509) 335-7424

Dr. Anna Forest
Utah State Dept of Agri
Box 146500
350 N Redwood Rd. Fl 3
Salt Lake City, UT 84116

Case#: 2017-14808
Report Date: 12/14/17

Submittal Date: 11/15/17
Owner: Cold Springs Trout Farm

Species:
Other: Fish

Age:
Sex:

Final Report:

Aquaculture- Reported on 12/14/17 Authorized by Kevin Snckvik, Section Head

Aquatic viral culture SOP: 905.2016.11.09

| Animal | Specimen | Result | Isolate |
|--------------------------------|-------------|----------|---------|
| 1-Lot 8 RBT 5F k/v/ms/wf | Tissue Pool | Negative | |
| 2 | Tissue Pool | Negative | |
| 3 | Tissue Pool | Negative | |
| 4 | Tissue Pool | Negative | |
| 5 | Tissue Pool | Negative | |
| 6 | Tissue Pool | Negative | |
| 7 | Tissue Pool | Negative | |
| 8 | Tissue Pool | Negative | |
| 9 | Tissue Pool | Negative | |
| 10 | Tissue Pool | Negative | |
| 11 | Tissue Pool | Negative | |
| 12 | Tissue Pool | Negative | |
| 13-Lot 1 BKT 5F Ovarian Fluids | Fluid-Ovary | Negative | |
| 14 | Fluid-Ovary | Negative | |
| 15 | Fluid-Ovary | Negative | |
| 16 | Fluid-Ovary | Negative | |
| 17 | Fluid-Ovary | Negative | |
| 18 | Fluid-Ovary | Negative | |
| 19 | Fluid-Ovary | Negative | |
| 20 | Fluid-Ovary | Negative | |
| 21 | Fluid-Ovary | Negative | |
| 22 | Fluid-Ovary | Negative | |
| 23 | Fluid-Ovary | Negative | |
| 24 | Fluid-Ovary | Negative | |
| 25-Lot 2 BNT 5F Ovarian Fluids | Fluid-Ovary | Negative | |
| 26 | Fluid-Ovary | Negative | |
| 27 | Fluid-Ovary | Negative | |
| 28 | Fluid-Ovary | Negative | |

Washington Animal Disease Diagnostic Lab

Aquatic viral culture SOP: 905.2016.11.09

| Animal | Specimen | Result | Isolate |
|--------------------------------|-------------|----------|---------|
| 29 | Fluid-Ovary | Negative | |
| 30 | Fluid-Ovary | Negative | |
| 31 | Fluid-Ovary | Negative | |
| 32 | Fluid-Ovary | Negative | |
| 33 | Fluid-Ovary | Negative | |
| 34 | Fluid-Ovary | Negative | |
| 35 | Fluid-Ovary | Negative | |
| 36 | Fluid-Ovary | Negative | |
| 37-Lot 3 RBT 5F Ovarian Fluids | Fluid-Ovary | Negative | |
| 38 | Fluid-Ovary | Negative | |
| 39 | Fluid-Ovary | Negative | |
| 40 | Fluid-Ovary | Negative | |
| 41 | Fluid-Ovary | Negative | |
| 42 | Fluid-Ovary | Negative | |
| 43 | Fluid-Ovary | Negative | |
| 44 | Fluid-Ovary | Negative | |
| 45 | Fluid-Ovary | Negative | |
| 46 | Fluid-Ovary | Negative | |
| 47 | Fluid-Ovary | Negative | |
| 48 | Fluid-Ovary | Negative | |

Aquatic viral culture test comment: All samples submitted on this case were negative for Oncorhynchus Masou Virus, Infectious Pancreatic Necrosis Virus, Infectious Hematopoietic Necrosis Virus, Viral Hemorrhagic Septicemia Virus, Epizootic Hematopoietic Necrosis Virus, and Spring Viremia of Carp on CHSE-214 & EPC cell lines.

Washington Animal Disease Diagnostic Lab

**P.O. Box 647034
Pullman, WA 99164-7034
Telephone : (509) 335-9696
Fax : (509) 335-7424**

**Dr. Anna Forest
Utah State Dept of Agri
Box 146500
350 N Redwood Rd. Fl 3
Salt Lake City, UT 84116**

**Case#: 2017-14725
Report Date: 12/13/17**

Submittal Date: 11/14/17
Owner: Cold Springs Trout Farm

Species:
Other: Fish

Age:
Sex:

Final Report:

Aquaculture- Reported on 12/13/17 Authorized by Kevin Snekvik, Section Head

Aquatic viral culture SOP: 905.2016.11.09

| Animal | Specimen | Result | Isolate |
|---------------------|-------------|----------|---------|
| 1-Lot 4 BKT 5F k/s | Tissue Pool | Negative | |
| 2 | Tissue Pool | Negative | |
| 3 | Tissue Pool | Negative | |
| 4 | Tissue Pool | Negative | |
| 5 | Tissue Pool | Negative | |
| 6 | Tissue Pool | Negative | |
| 7 | Tissue Pool | Negative | |
| 8 | Tissue Pool | Negative | |
| 9 | Tissue Pool | Negative | |
| 10 | Tissue Pool | Negative | |
| 11 | Tissue Pool | Negative | |
| 12 | Tissue Pool | Negative | |
| 13-Lot 5 BNT 5F k/s | Tissue Pool | Negative | |
| 14 | Tissue Pool | Negative | |
| 15 | Tissue Pool | Negative | |
| 16 | Tissue Pool | Negative | |
| 17 | Tissue Pool | Negative | |
| 18 | Tissue Pool | Negative | |
| 19 | Tissue Pool | Negative | |
| 20 | Tissue Pool | Negative | |
| 21 | Tissue Pool | Negative | |
| 22 | Tissue Pool | Negative | |
| 23 | Tissue Pool | Negative | |
| 24 | Tissue Pool | Negative | |
| 25-Lot 6 RBT 5F k/s | Tissue Pool | Negative | |
| 26 | Tissue Pool | Negative | |
| 27 | Tissue Pool | Negative | |
| 28 | Tissue Pool | Negative | |

Washington Animal Disease Diagnostic Lab

Aquatic viral culture SOP: 905.2016.11.09

| Animal | Specimen | Result | Isolate |
|--------------------|-------------|----------|---------|
| 29 | Tissue Pool | Negative | |
| 30 | Tissue Pool | Negative | |
| 31 | Tissue Pool | Negative | |
| 32 | Tissue Pool | Negative | |
| 33 | Tissue Pool | Negative | |
| 34 | Tissue Pool | Negative | |
| 35 | Tissue Pool | Negative | |
| 36 | Tissue Pool | Negative | |
| 37-Lot 7 TT 5F k/s | Tissue Pool | Negative | |
| 38 | Tissue Pool | Negative | |
| 39 | Tissue Pool | Negative | |
| 40 | Tissue Pool | Negative | |
| 41 | Tissue Pool | Negative | |
| 42 | Tissue Pool | Negative | |
| 43 | Tissue Pool | Negative | |
| 44 | Tissue Pool | Negative | |
| 45 | Tissue Pool | Negative | |
| 46 | Tissue Pool | Negative | |
| 47 | Tissue Pool | Negative | |
| 48 | Tissue Pool | Negative | |

Aquatic viral culture test comment: All samples submitted on this case were negative for Oncorhynchus Masou Virus, Infectious Pancreatic Necrosis Virus, Infectious Hematopoietic Necrosis Virus, Viral Hemorrhagic Septicemia Virus, Epizootic Hematopoietic Necrosis Virus, and Spring Viremia of Carp on CHSE-214 & EPC cell lines.

Previously reported results:

Aquaculture- Last reported on 12/08/17 Authorized by Kevin Snekvik, Section Head

Aquatic bacterial screen SOP: 936.2015.08.05

| Animal | Specimen | Result | Isolate |
|-----------|----------------|--------------|---------|
| Lot 6 RBT | Culture Medium | See comment. | |

Result Comment: All samples submitted on this case were negative for Aeromonas salmonicida and Yersinia ruckeri. Comment:
Bacterial contaminants were present in >50% of 60 samples submitted. While this submission can be evaluated, high levels of contamination greatly increase the difficulty and time required for laboratory screening.

BKD FA SOP: 919.2015.06.17

| Animal | Specimen | Result |
|-------------------------------|----------|----------|
| 1-Lot 4 BKT Individual Kidney | Kidney | Negative |
| 2 | Kidney | Negative |
| 3 | Kidney | Negative |
| 4 | Kidney | Negative |

Washington Animal Disease Diagnostic Lab

BKD FA SOP: 919.2015.06.17

| Animal | Specimen | Result |
|--------|----------|----------|
| 5 | Kidney | Negative |
| 6 | Kidney | Negative |
| 7 | Kidney | Negative |
| 8 | Kidney | Negative |
| 9 | Kidney | Negative |
| 10 | Kidney | Negative |
| 11 | Kidney | Negative |
| 12 | Kidney | Negative |
| 13 | Kidney | Negative |
| 14 | Kidney | Negative |
| 15 | Kidney | Negative |
| 16 | Kidney | Negative |
| 17 | Kidney | Negative |
| 18 | Kidney | Negative |
| 19 | Kidney | Negative |
| 20 | Kidney | Negative |
| 21 | Kidney | Negative |
| 22 | Kidney | Negative |
| 23 | Kidney | Negative |
| 24 | Kidney | Negative |
| 25 | Kidney | Negative |
| 26 | Kidney | Negative |
| 27 | Kidney | Negative |
| 28 | Kidney | Negative |
| 29 | Kidney | Negative |
| 30 | Kidney | Negative |
| 31 | Kidney | Negative |
| 32 | Kidney | Negative |
| 33 | Kidney | Negative |
| 34 | Kidney | Negative |
| 35 | Kidney | Negative |
| 36 | Kidney | Negative |
| 37 | Kidney | Negative |
| 38 | Kidney | Negative |
| 39 | Kidney | Negative |
| 40 | Kidney | Negative |
| 41 | Kidney | Negative |
| 42 | Kidney | Negative |
| 43 | Kidney | Negative |
| 44 | Kidney | Negative |
| 45 | Kidney | Negative |
| 46 | Kidney | Negative |
| 47 | Kidney | Negative |
| 48 | Kidney | Negative |
| 49 | Kidney | Negative |
| 50 | Kidney | Negative |
| 51 | Kidney | Negative |
| 52 | Kidney | Negative |
| 53 | Kidney | Negative |
| 54 | Kidney | Negative |
| 55 | Kidney | Negative |
| 56 | Kidney | Negative |

Washington Animal Disease Diagnostic Lab

BKD FA SOP: 919.2015.06.17

| Animal | Specimen | Result |
|--------|----------|----------|
| 57 | Kidney | Negative |
| 58 | Kidney | Negative |
| 59 | Kidney | Negative |
| 60 | Kidney | Negative |

M. cerebralis digest SOP: 922.2015.06.08

| Animal | Specimen | Result |
|----------------------|-----------|---------------------|
| 1-Lot 6 RBT 5F Heads | Head pool | Negative by digest. |
| 2 | Head pool | Negative by digest. |
| 3 | Head pool | Negative by digest. |
| 4 | Head pool | Negative by digest. |
| 5 | Head pool | Negative by digest. |
| 6 | Head pool | Negative by digest. |
| 7 | Head pool | Negative by digest. |
| 8 | Head pool | Negative by digest. |
| 9 | Head pool | Negative by digest. |
| 10 | Head pool | Negative by digest. |
| 11 | Head pool | Negative by digest. |
| 12 | Head pool | Negative by digest. |

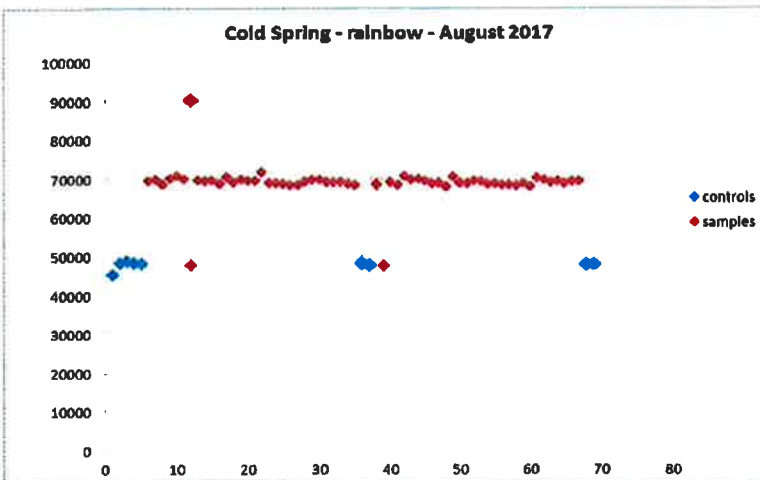
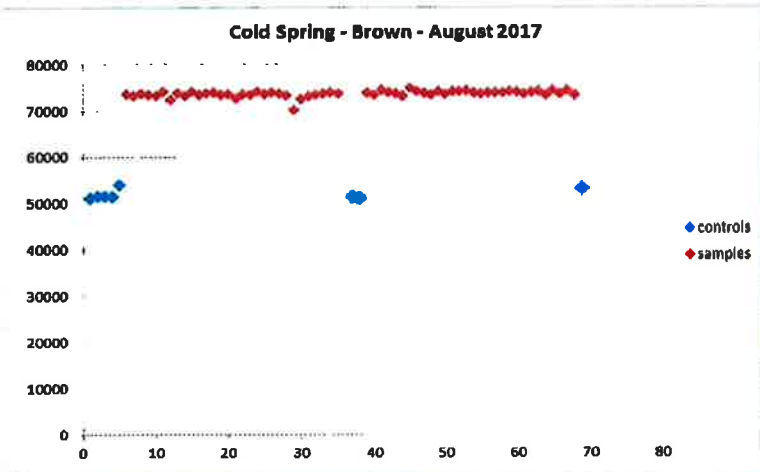
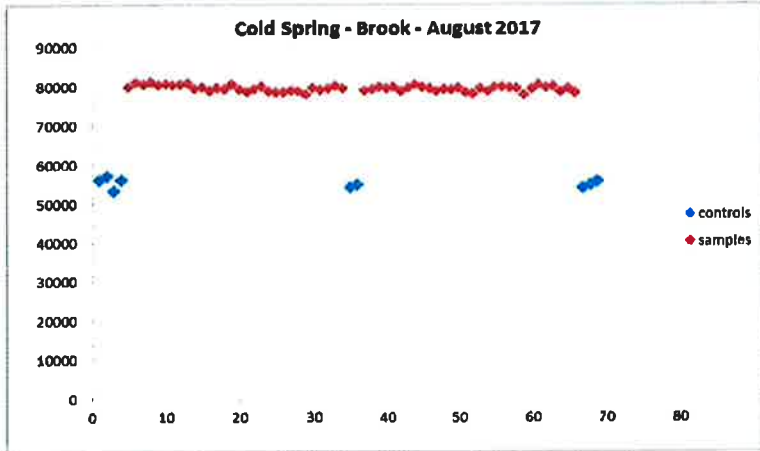
28 July 2017

Cold Spring Farm, sampled on 8/8/2017

Blood samples analysed at Department of Pathology Flow Cytometry Center
University of Washington, Seattle WA

| | triploid | not triploid |
|---------|----------|--------------|
| Brook | 60 | 0 |
| Brown | 60 | 0 |
| Rainbow | 58 | 2 |

(one is diploid, one is a mix of diploid and tetraploid)



controls in blue

diploid samples in pink

| Brook | | |
|--------|------------|---------|
| sample | name | G1 MEAN |
| 1 | diploid-2 | 56043 |
| 2 | diploid-3 | 57106 |
| 3 | diploid-4 | 53191 |
| 4 | diploid-5 | 56022 |
| 5 | 1 | 79832 |
| 6 | 2 | 81084 |
| 7 | 3 | 80565 |
| 8 | 4 | 81231 |
| 9 | 5 | 80387 |
| 10 | 6 | 80841 |
| 11 | 7 | 80366 |
| 12 | 8 | 80613 |
| 13 | 9 | 80854 |
| 14 | 10 | 79504 |
| 15 | 11 | 79880 |
| 16 | 12 | 78982 |
| 17 | 13 | 79771 |
| 18 | 14 | 79337 |
| 19 | 15 | 80567 |
| 20 | 16 | 79362 |
| 21 | 17 | 78627 |
| 22 | 18 | 79389 |
| 23 | 19 | 80026 |
| 24 | 20 | 78878 |
| 25 | 21 | 78474 |
| 26 | 22 | 78557 |
| 27 | 23 | 79014 |
| 28 | 24 | 78905 |
| 29 | 25 | 77993 |
| 30 | 26 | 79652 |
| 31 | 27 | 79210 |
| 32 | 28 | 79557 |
| 33 | 29 | 80194 |
| 34 | 30 | 79577 |
| 35 | diploid-1a | 54021 |
| 36 | diploid-2a | 54814 |
| 37 | 31 | 79030 |
| 38 | 32 | 79424 |
| 39 | 33 | 79831 |
| 40 | 34 | 79532 |
| 41 | 35 | 79919 |
| 42 | 36 | 78827 |
| 43 | 37 | 79776 |
| 44 | 38 | 80529 |
| 45 | 39 | 79925 |
| 46 | 40 | 79500 |
| 47 | 41 | 78845 |
| 48 | 42 | 79401 |
| 49 | 43 | 79244 |
| 50 | 44 | 79647 |
| 51 | 45 | 78558 |
| 52 | 46 | 78182 |
| 53 | 47 | 79532 |
| 54 | 48 | 78898 |
| 55 | 49 | 79866 |
| 56 | 50 | 79865 |
| 57 | 51 | 79688 |
| 58 | 52 | 79565 |
| 59 | 53 | 77758 |
| 60 | 54 | 79346 |
| 61 | 55 | 80393 |
| 62 | 56 | 79684 |
| 63 | 57 | 80016 |
| 64 | 58 | 78637 |
| 65 | 59 | 79533 |
| 66 | 60 | 78325 |
| 67 | diploid-1b | 53964 |
| 68 | diploid-2b | 54791 |
| 69 | diploid-3b | 55673 |

| Brown | | |
|--------|------------|---------|
| sample | name | G1 MEAN |
| 1 | diploid-1 | 51061 |
| 2 | diploid-2 | 51363 |
| 3 | diploid-3 | 51419 |
| 4 | diploid-4 | 51302 |
| 5 | diploid-5 | 53878 |
| 6 | 1 | 73503 |
| 7 | 2 | 73178 |
| 8 | 3 | 73682 |
| 9 | 4 | 73385 |
| 10 | 5 | 73254 |
| 11 | 6 | 74074 |
| 12 | 7 | 72281 |
| 13 | 8 | 73842 |
| 14 | 9 | 73237 |
| 15 | 10 | 74042 |
| 16 | 11 | 73287 |
| 17 | 12 | 73737 |
| 18 | 13 | 73910 |
| 19 | 14 | 73385 |
| 20 | 15 | 73448 |
| 21 | 16 | 72615 |
| 22 | 17 | 73468 |
| 23 | 18 | 73361 |
| 24 | 19 | 74156 |
| 25 | 20 | 73552 |
| 26 | 21 | 73898 |
| 27 | 22 | 73705 |
| 28 | 23 | 73242 |
| 29 | 24 | 70069 |
| 30 | 25 | 72436 |
| 31 | 26 | 73090 |
| 32 | 27 | 73390 |
| 33 | 28 | 73704 |
| 34 | 29 | 73898 |
| 35 | 30 | 73684 |
| 36 | diploid-1a | 51244 |
| 37 | diploid-2a | 51060 |
| 38 | 31 | 73767 |
| 39 | 32 | 73341 |
| 40 | 33 | 74392 |
| 41 | 34 | 73936 |
| 42 | 35 | 73659 |
| 43 | 36 | 73072 |
| 44 | 37 | 74856 |
| 45 | 38 | 74153 |
| 46 | 39 | 73737 |
| 47 | 40 | 73297 |
| 48 | 41 | 74166 |
| 49 | 42 | 73487 |
| 50 | 43 | 74041 |
| 51 | 44 | 74055 |
| 52 | 45 | 74296 |
| 53 | 46 | 73802 |
| 54 | 47 | 73471 |
| 55 | 48 | 73768 |
| 56 | 49 | 73854 |
| 57 | 50 | 73844 |
| 58 | 51 | 74157 |
| 59 | 52 | 74015 |
| 60 | 53 | 73471 |
| 61 | 54 | 73761 |
| 62 | 55 | 74075 |
| 63 | 56 | 73269 |
| 64 | 57 | 74210 |
| 65 | 58 | 73578 |
| 66 | 59 | 74197 |
| 67 | 60 | 73190 |
| 68 | diploid-1b | 52804 |

| Rainbow | | | |
|---------|------------|---------|-------|
| sample | name | G1 MEAN | |
| 1 | diploid-1 | 45211 | 90370 |
| 2 | diploid-2 | 48227 | |
| 3 | diploid-3 | 48791 | |
| 4 | diploid-4 | 48211 | |
| 5 | diploid-5 | 48158 | |
| 6 | 1 | 69599 | |
| 7 | 2 | 69997 | |
| 8 | 3 | 68636 | |
| 9 | 4 | 70310 | |
| 10 | 5 | 70980 | |
| 11 | 6 | 70064 | |
| 12 | 7 | 47792 | |
| 13 | 8 | 69767 | |
| 14 | 9 | 69494 | |
| 15 | 10 | 69740 | |
| 16 | 11 | 68768 | |
| 17 | 12 | 70628 | |
| 18 | 13 | 69154 | |
| 19 | 14 | 69866 | |
| 20 | 15 | 69568 | |
| 21 | 16 | 69545 | |
| 22 | 17 | 71789 | |
| 23 | 18 | 69080 | |
| 24 | 19 | 68995 | |
| 25 | 20 | 68794 | |
| 26 | 21 | 68428 | |
| 27 | 22 | 68456 | |
| 28 | 23 | 69338 | |
| 29 | 24 | 69847 | |
| 30 | 25 | 69902 | |
| 31 | 26 | 69218 | |
| 32 | 27 | 69141 | |
| 33 | 28 | 69376 | |
| 34 | 29 | 68862 | |
| 35 | 30 | 68439 | |
| 36 | diploid-1a | 48142 | |
| 37 | diploid-2a | 47672 | |
| 38 | 31 | 68494 | |
| 39 | 32 | 47521 | |
| 40 | 33 | 69252 | |
| 41 | 34 | 68514 | |
| 42 | 35 | 70795 | |
| 43 | 36 | 69865 | |
| 44 | 37 | 70064 | |
| 45 | 38 | 69549 | |
| 46 | 39 | 68895 | |
| 47 | 40 | 69078 | |
| 48 | 41 | 68055 | |
| 49 | 42 | 70671 | |
| 50 | 43 | 68987 | |
| 51 | 44 | 68818 | |
| 52 | 45 | 69521 | |
| 53 | 46 | 69313 | |
| 54 | 47 | 68677 | |
| 55 | 48 | 68877 | |
| 56 | 49 | 68494 | |
| 57 | 50 | 68550 | |
| 58 | 51 | 68307 | |
| 59 | 52 | 68780 | |
| 60 | 53 | 67964 | |
| 61 | 54 | 70349 | |
| 62 | 55 | 69693 | |
| 63 | 56 | 68983 | |
| 64 | 57 | 69440 | |
| 65 | 58 | 68867 | |
| 66 | 59 | 69421 | |
| 67 | 60 | 69317 | |
| 68 | diploid-1b | 47836 | |
| 69 | diploid-2b | 47843 | |

