

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Farm Location : JAWA TENGAH, PURWOREJO, GRABAG
Pond Quantity : 5
Cycle Period : 24 December 2019 — 21 March 2020

SUMMARY



Harvest result **good**

The harvest result in this cycle period is good based on the survival rate (SR) and the shrimp size. Total harvest is 11391.62 kg.



Survival rate (SR) **good**

The survival rate (SR) is good ($\geq 80\%$).



FCR **not ideal**

The final result of feed conversion ratio (FCR) is not ideal, the feed program must be evaluated.



Water quality **stable**

The water quality is not yet stable, this can affect shrimp's appetite, growth, and survival rate (SR).



Carrying capacity **good**

Carrying capacity has been considered well, i.e. shrimp density, pond depth, and number of water wheels.



Shrimp growth **not good**

Shrimp growth is at not good rate, which is $< 0,2$ gram/day.

POND RECAP

Standard pond performance
 Best pond performance
 Worst pond performance

Pond Number	Pond Area (m ²)	DOC (day)	Total Seed	Seeds Density (ind/m ²)	Total Feed (kg)	Harvest Biomass (kg)	Harvest Size (ind/kg)	FCR	SR (%)
Kolam B1	1,064	89	80,000	75.19	1,541	1,508	35	1.021	83.931
Kolam B4	1,811	84	150,000	82.83	1,975	1,341	51	1.472	45.593
Kolam B6	1,498	109	175,000	116.82	4,666	2,865	53	1.629	95.483
Kolam B8	1,600	109	170,000	106.25	4,664	3,319	50	1.405	107.003
Kolam T3	973	110	100,000	102.77	3,165	2,358	45	1.342	116.283
Total					16,010	11,392			

Notes

- Pond performance assessment is relative
- Assessment of ponds with good performance is based on optimal harvest result, low FCR and high SR
- Assessment of ponds with poor performance is based on low harvest result, high FCR and low SR

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Kolam B1







Pond performance is standard

RFID: 83F9DE1A

Farm Location	:	JAWA TENGAH, PURWOREJO, GRABAG
Pond name/number	:	Kolam B1
Started at	:	24 December 2019
Total seed (tail)	:	80,000
Seeds density (ind/m²)	:	75
Pond area (m²)	:	1,064
Pond depth (m)	:	1.1
Biomass limit (kg/m²)	:	1.2
Harvest date (DOC)	:	21 March 2020 (89)

FCR	:	1.021	Total harvest biomass (kg)	:	1,508
SR (%)	:	83.931	Total feed (kg)	:	1,541
Last MBW (gram)	:	29	Shrimp last size	:	35

SUMMARY

-  The harvest result is good based on the survival rate (SR) and shrimp size.
-  The survival rate (SR) is good ($\geq 80\%$).
-  The final result of FCR is ideal.
-  The water quality is not yet stable.
-  Carrying capacity has been considered well.
-  Shrimp growth rate is good.

Input:

1. Perform water quality management so that it is within the optimal range for shrimp growth. The impact can increase appetite, growth, and the value of survival rate (SR).

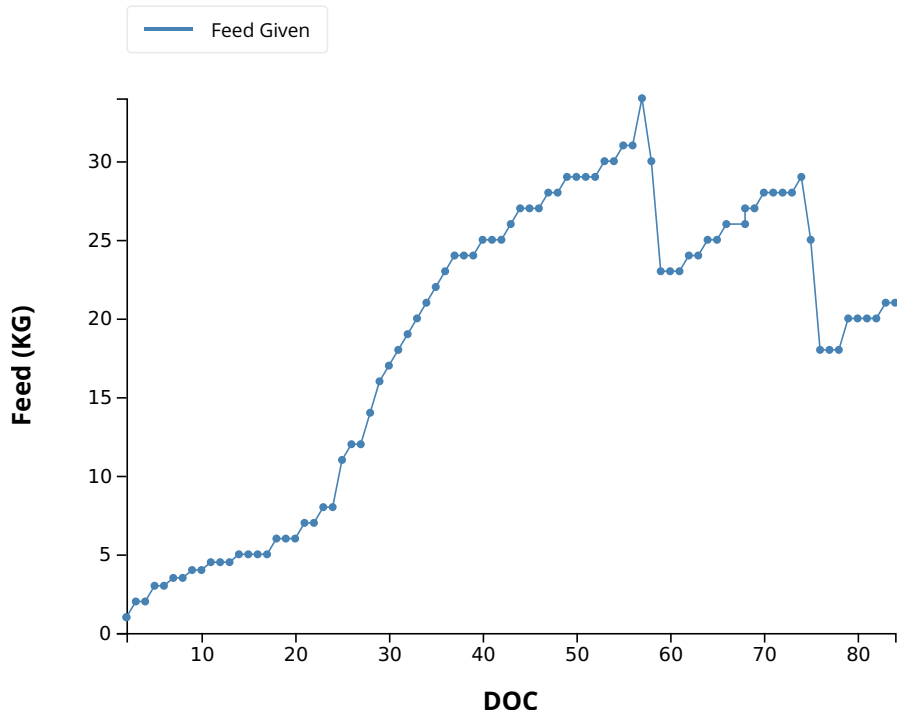
DATA SAMPLING

The following are sampling data collection. There are 7 samplings in 1 cycle with MBW and ADG calculation as follows.

Age	Date	MBW (gram)	ADG (gram/day)
31	23 Jan 2020	4.30	0.00
38	30 Jan 2020	6.50	0.31
45	06 Feb 2020	9.60	0.44
52	13 Feb 2020	11.80	0.31
59	20 Feb 2020	15.90	0.59
66	27 Feb 2020	19.20	0.47
80	12 Mar 2020	23.80	0.33

FEED DATA

Daily Feed Chart

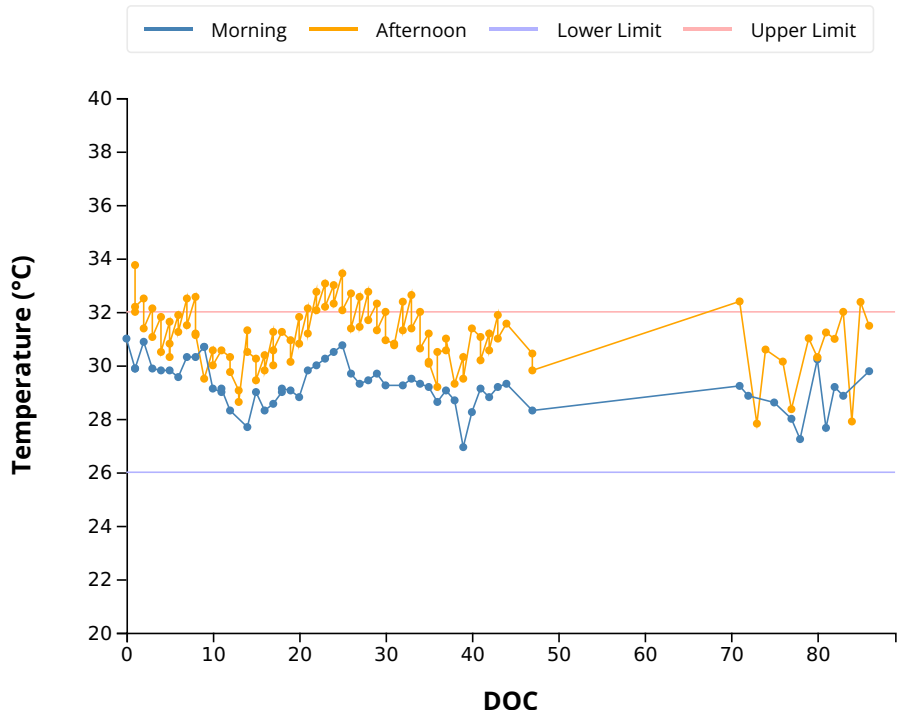


Notes

✔ Feed Accumulation **1,541 kg**

WATER QUALITY DATA

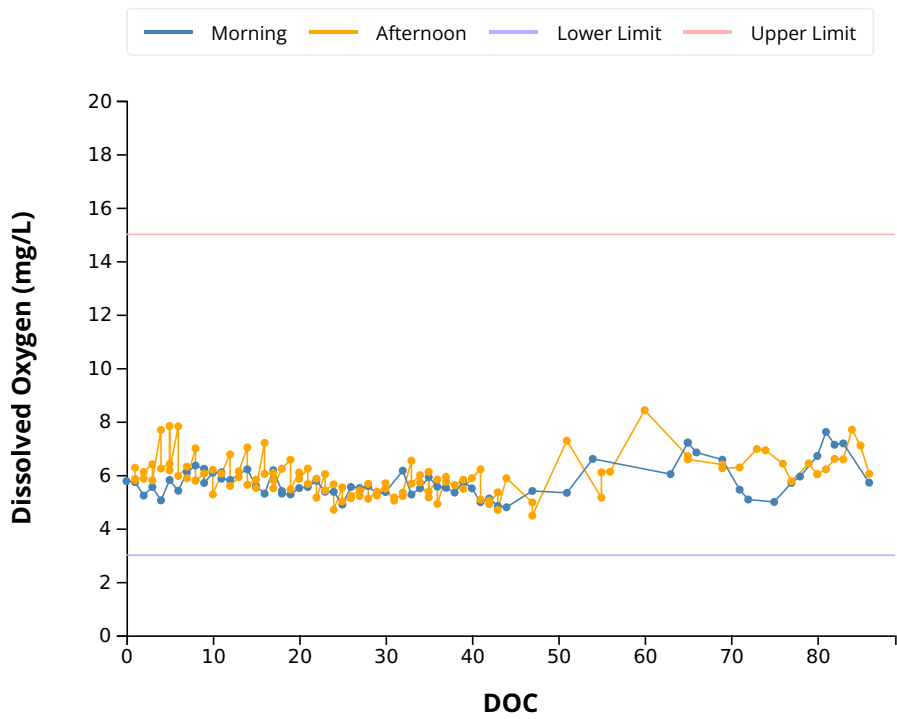
Daily Temperature Chart



Notes

⚠ **temperature is less ideal**
Ideal range (26 - 32°C)

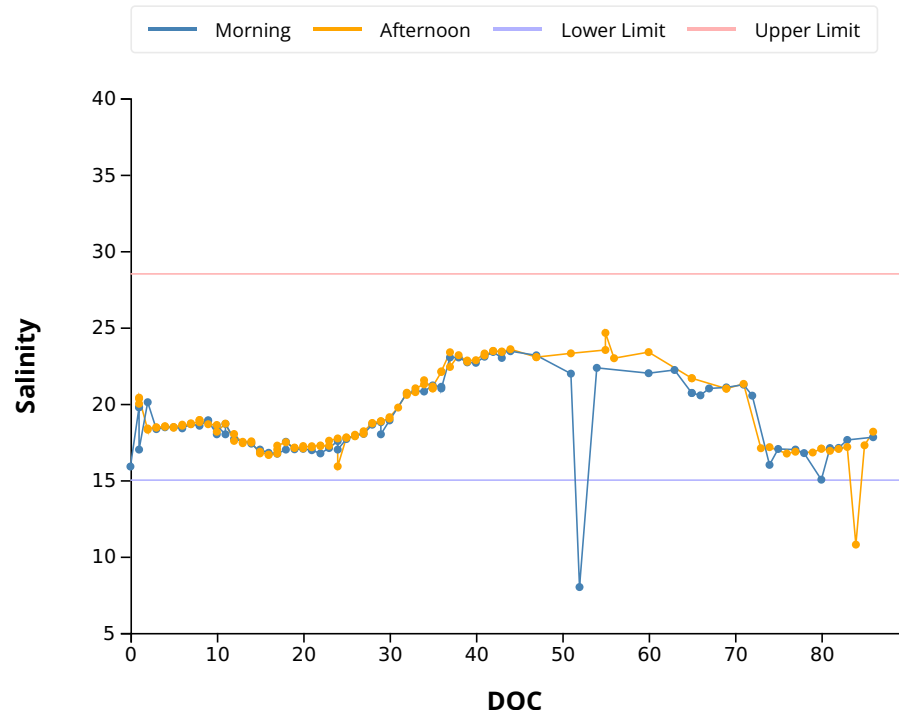
Daily Dissolved Oxygen Chart



Notes

✔ **Dissolved Oxygen is ideal**
Ideal range (3 - 15mg/L)

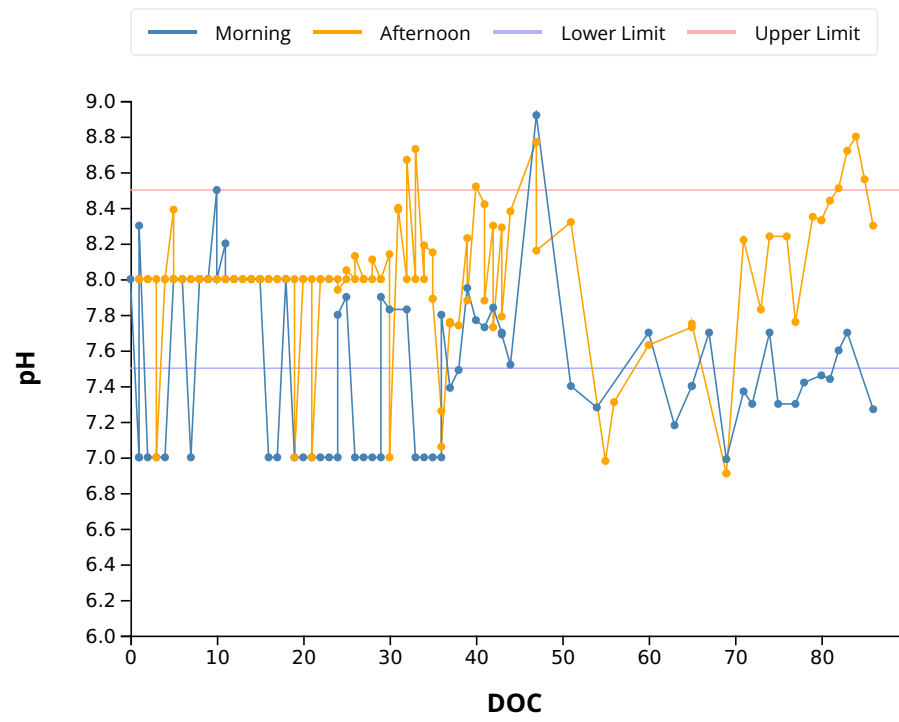
Daily Salinity Chart



Notes

✓ **Salinity is ideal**
Ideal range (15 - 28.5)

Daily pH Chart



Notes

⚠ **ph is less ideal**
Ideal range (7.5 - 8.5)

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Kolam B4







Pond performance is bad

RFID: 8373E01A

Farm Location	:	JAWA TENGAH, PURWOREJO, GRABAG
Pond name/number	:	Kolam B4
Started at	:	30 January 2020
Total seed (tail)	:	150,000
Seeds density (ind/m²)	:	83
Pond area (m²)	:	1,811
Pond depth (m)	:	0.9
Biomass limit (kg/m²)	:	1.2
Harvest date (DOC)	:	23 April 2020 (84)

FCR	:	1.472	Total harvest biomass (kg)	:	1,341
SR (%)	:	45.593	Total feed (kg)	:	1,975
Last MBW (gram)	:	20	Shrimp last size	:	51

SUMMARY

-  The harvest result is not good based on the survival rate (SR) and shrimp size.
-  The survival rate (SR) is not good (< 80%).
-  The final result of FCR is not ideal.
-  The water quality is not yet stable.
-  Carrying capacity has been considered well.
-  Shrimp growth rate is good.

Input:

- Evaluate the feed program and while considering shrimp appetite.
- Perform water quality management so that it is within the optimal range for shrimp growth. The impact can increase appetite, growth, and the value of survival rate (SR).

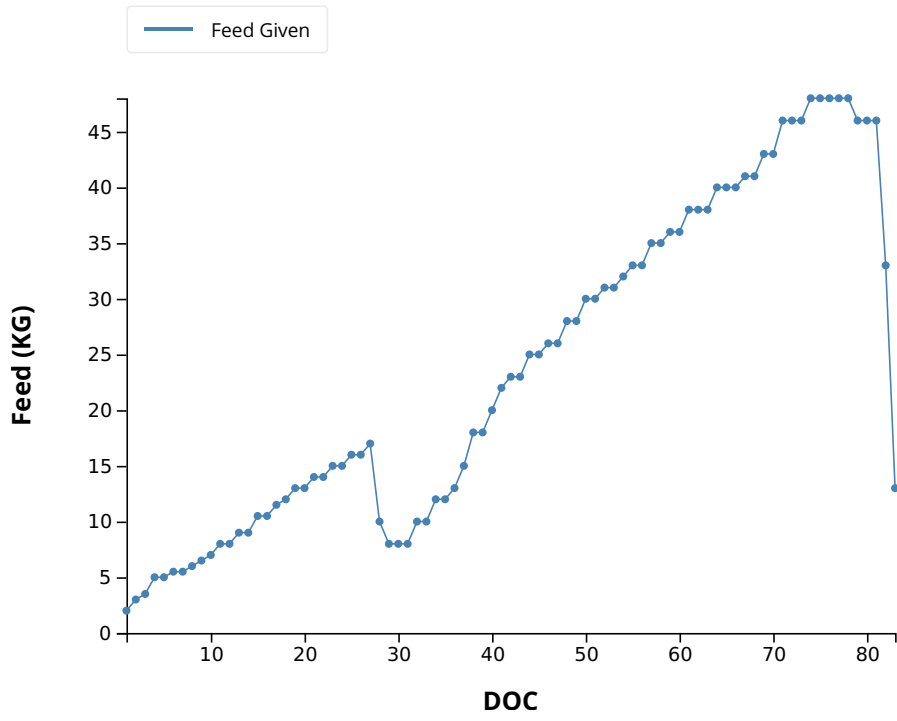
DATA SAMPLING

The following are sampling data collection. There are 5 samplings in 1 cycle with MBW and ADG calculation as follows.

Age	Date	MBW (gram)	ADG (gram/day)
55	25 Mar 2020	8.80	0.00
62	01 Apr 2020	10.90	0.30
69	08 Apr 2020	13.10	0.31
76	15 Apr 2020	15.40	0.33
82	21 Apr 2020	17.90	0.42

FEED DATA

Daily Feed Chart

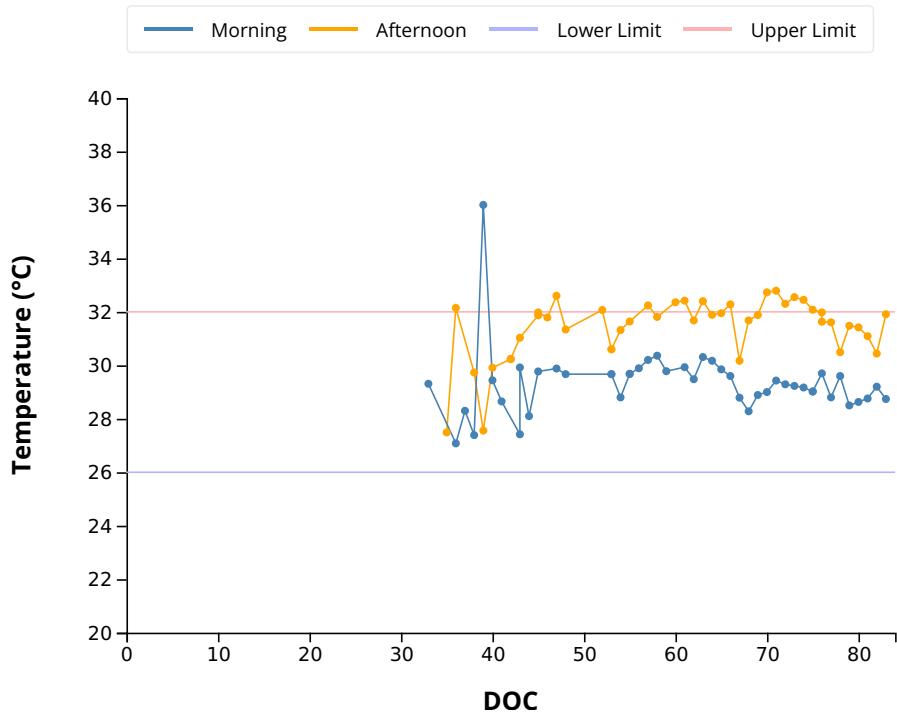


Notes

✔ Feed Accumulation **1,975 kg**

WATER QUALITY DATA

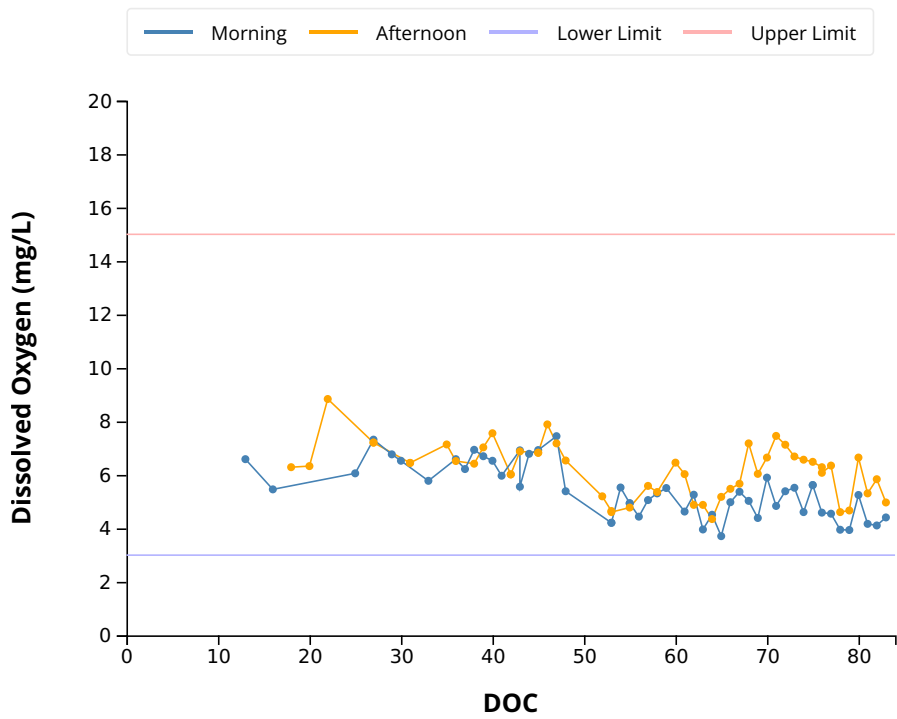
Daily Temperature Chart



Notes

⚠ **temperature is less ideal**
Ideal range (26 - 32°C)

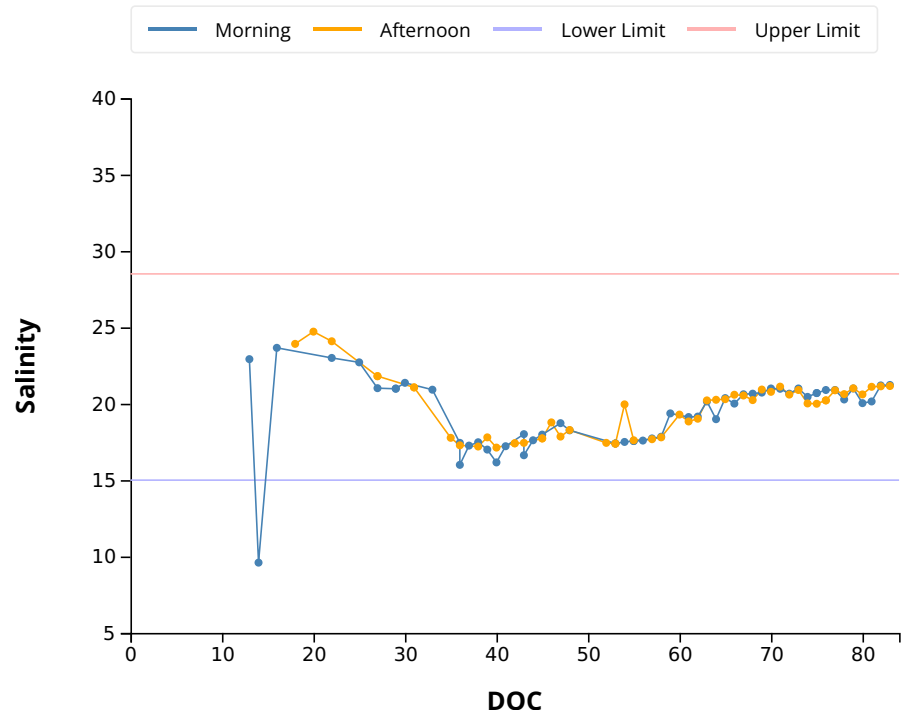
Daily Dissolved Oxygen Chart



Notes

✔ **Dissolved Oxygen is ideal**
Ideal range (3 - 15mg/L)

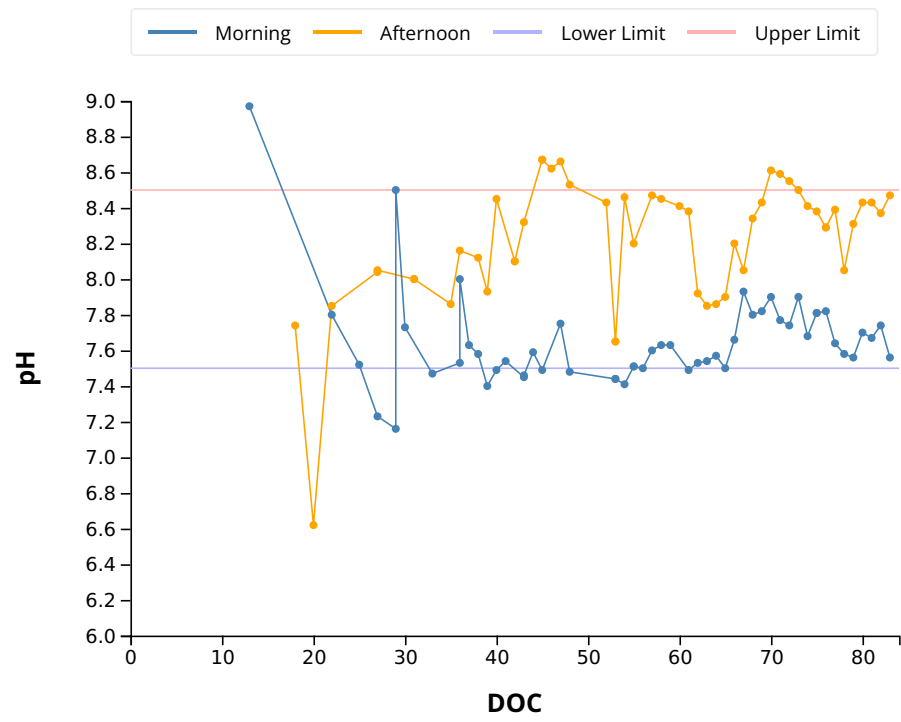
Daily Salinity Chart



Notes

✔ **Salinity is ideal**
Ideal range (15 - 28.5)

Daily pH Chart



Notes

⚠ **ph is less ideal**
Ideal range (7.5 - 8.5)

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Kolam B6







Pond performance is standard

RFID: AA8A0214

Farm Location	:	JAWA TENGAH, PURWOREJO, GRABAG
Pond name/number	:	Kolam B6
Started at	:	02 December 2019
Total seed (tail)	:	175,000
Seeds density (ind/m²)	:	117
Pond area (m²)	:	1,498
Pond depth (m)	:	0.9
Biomass limit (kg/m²)	:	1.25
Harvest date (DOC)	:	19 March 2020 (109)

FCR	:	1.629	Total harvest biomass (kg)	:	2,865
SR (%)	:	95.483	Total feed (kg)	:	4,666
Last MBW (gram)	:	19	Shrimp last size	:	53

SUMMARY

-  The harvest result is not good based on the survival rate (SR) and shrimp size.
-  The survival rate (SR) is good ($\geq 80\%$).
-  The final result of FCR is not ideal.
-  The water quality is not yet stable.
-  Carrying capacity has been considered well.
-  Shrimp growth rate is not good.

Input:

- Evaluate the feed program and while considering shrimp appetite.
- Perform water quality management so that it is within the optimal range for shrimp growth. The impact can increase appetite, growth, and the value of survival rate (SR).

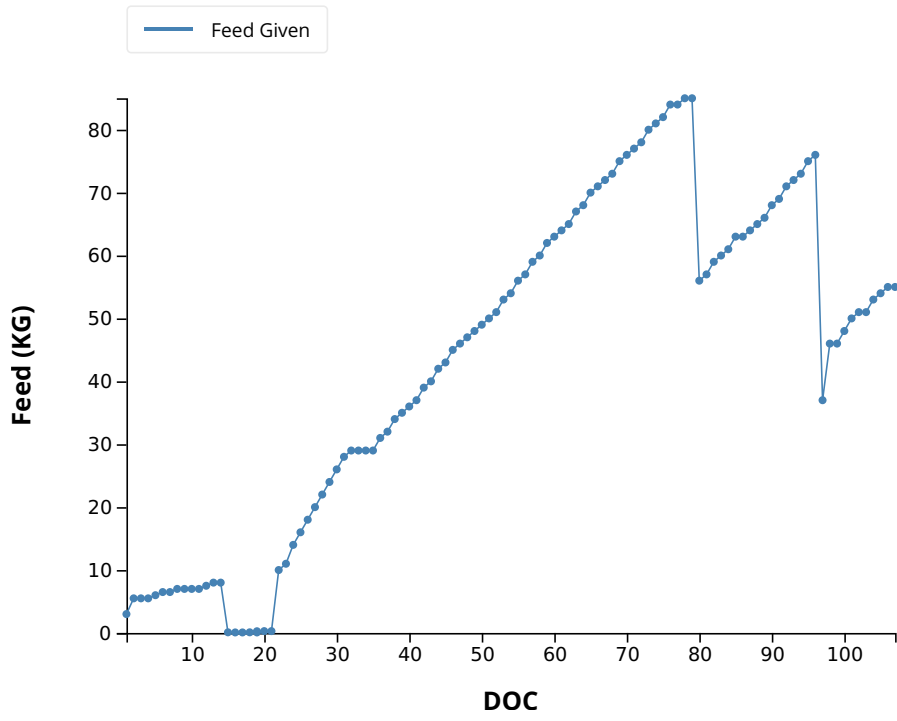
DATA SAMPLING

The following are sampling data collection. There are 11 samplings in 1 cycle with MBW and ADG calculation as follows.

Age	Date	MBW (gram)	ADG (gram/day)
32	02 Jan 2020	2.70	0.00
39	09 Jan 2020	4.10	0.20
46	16 Jan 2020	5.90	0.26
53	23 Jan 2020	7.70	0.26
60	30 Jan 2020	9.40	0.24
67	06 Feb 2020	11.40	0.29
74	13 Feb 2020	14.30	0.41
81	20 Feb 2020	15.90	0.23
88	27 Feb 2020	17.90	0.29
95	05 Mar 2020	19.60	0.24
102	12 Mar 2020	21.20	0.23

FEED DATA

Daily Feed Chart

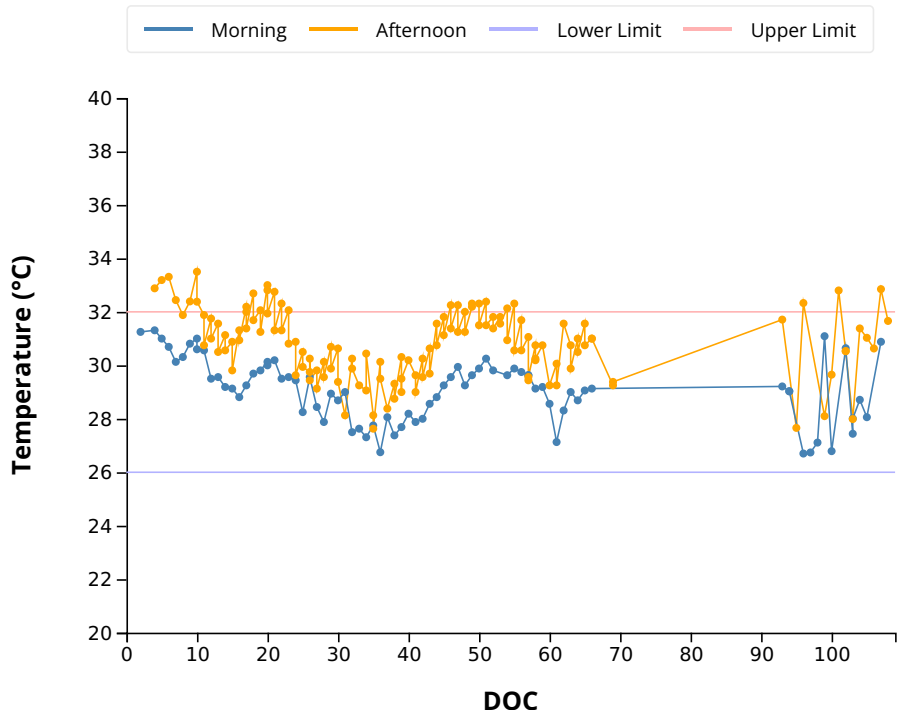


Notes

✔ Feed Accumulation **4,666 kg**

WATER QUALITY DATA

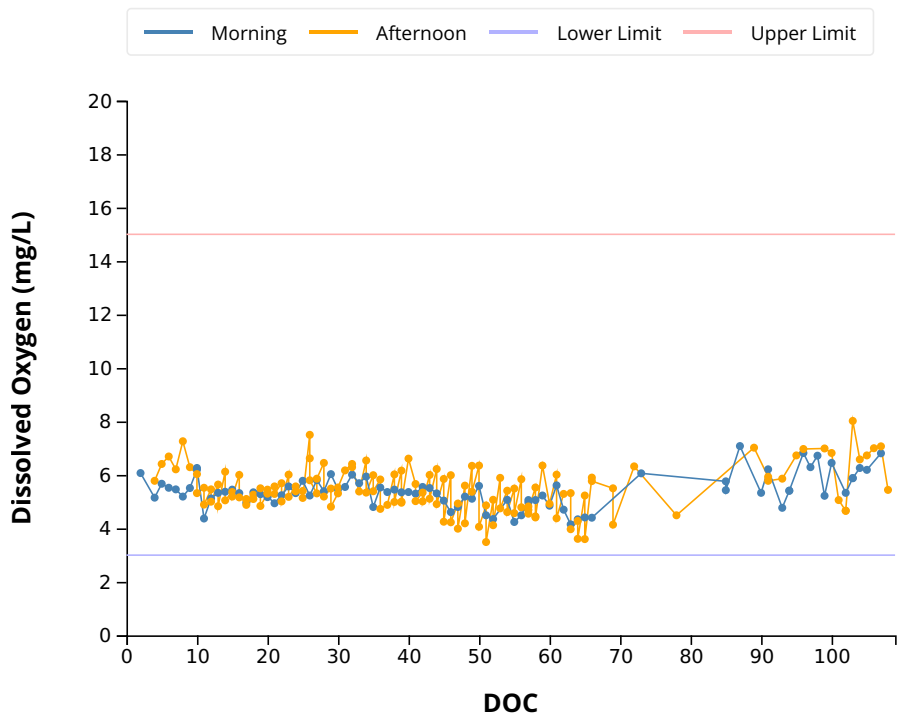
Daily Temperature Chart



Notes

✔ **Temperature is ideal**
Ideal range (26 - 32°C)

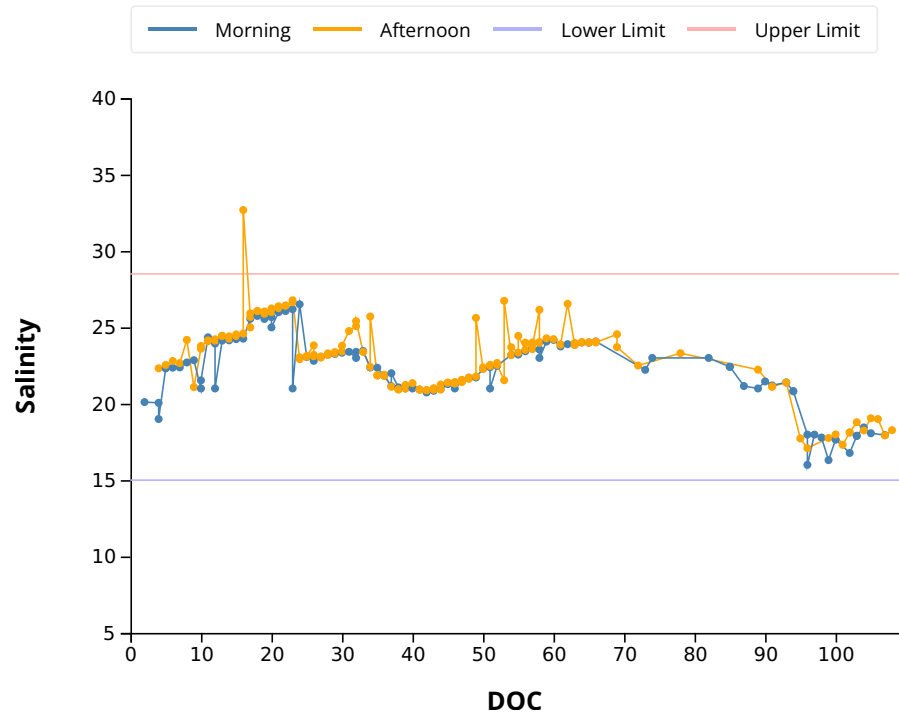
Daily Dissolved Oxygen Chart



Notes

✔ **Dissolved Oxygen is ideal**
Ideal range (3 - 15mg/L)

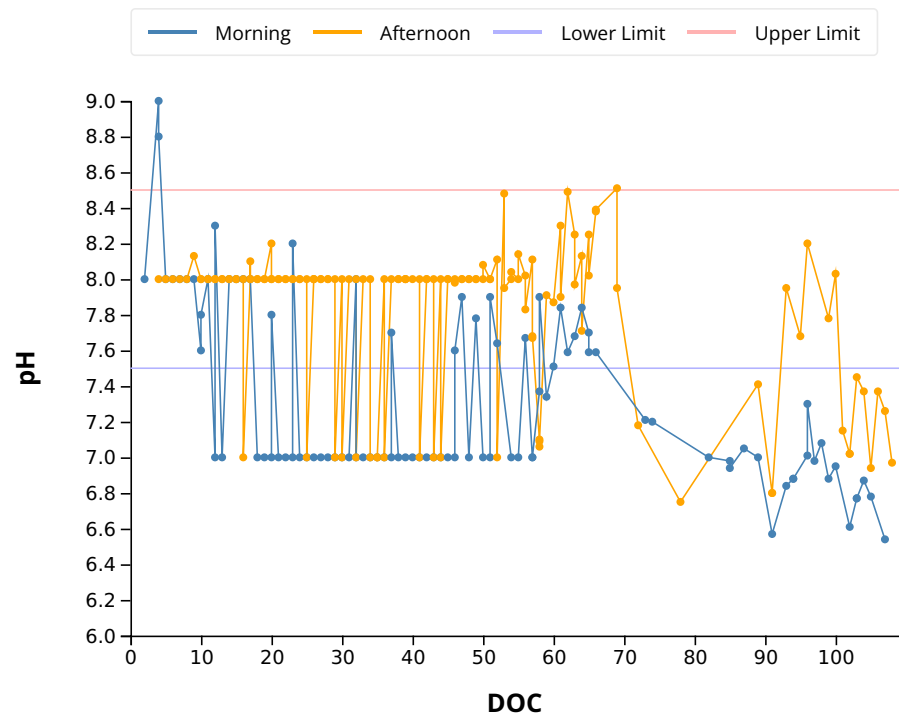
Daily Salinity Chart



Notes

✓ **Salinity is ideal**
Ideal range (15 - 28.5)

Daily pH Chart



Notes

⚠ **ph is less ideal**
Ideal range (7.5 - 8.5)

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Kolam B8







Pond performance is standard

RFID: 6E21C5DF

Farm Location	:	JAWA TENGAH, PURWOREJO, GRABAG
Pond name/number	:	Kolam B8
Started at	:	02 December 2019
Total seed (tail)	:	170,000
Seeds density (ind/m²)	:	106
Pond area (m²)	:	1,600
Pond depth (m)	:	1.1
Biomass limit (kg/m²)	:	1.25
Harvest date (DOC)	:	19 March 2020 (109)

FCR	:	1.405	Total harvest biomass (kg)	:	3,319
SR (%)	:	107.003	Total feed (kg)	:	4,664
Last MBW (gram)	:	20	Shrimp last size	:	50

SUMMARY

-  The harvest result is good based on the survival rate (SR) and shrimp size.
-  The survival rate (SR) is good ($\geq 80\%$).
-  The final result of FCR is not ideal.
-  The water quality is not yet stable.
-  Carrying capacity not yet considered well.
-  Shrimp growth rate is not good.

Input:

- Evaluate the feed program and while considering shrimp appetite.
- Perform water quality management so that it is within the optimal range for shrimp growth. The impact can increase appetite, growth, and the value of survival rate (SR).
- Perform carrying capacity by considering the shrimp density, depth of ponds, and the number of water wheels.

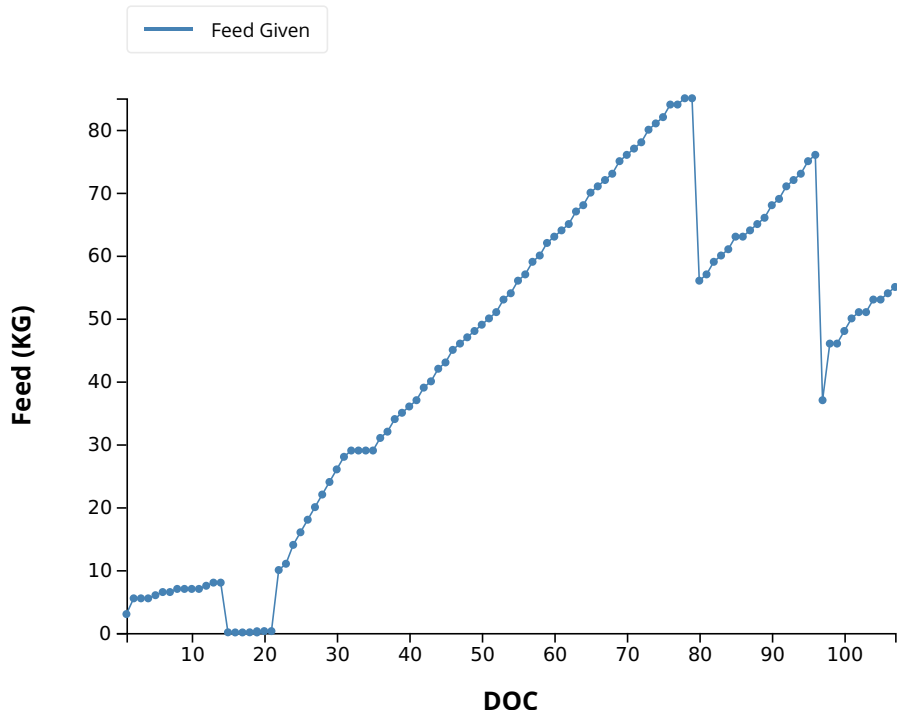
DATA SAMPLING

The following are sampling data collection. There are 11 samplings in 1 cycle with MBW and ADG calculation as follows.

Age	Date	MBW (gram)	ADG (gram/day)
32	02 Jan 2020	2.80	0.00
39	09 Jan 2020	4.30	0.21
46	16 Jan 2020	6.00	0.24
53	23 Jan 2020	7.90	0.27
60	30 Jan 2020	9.60	0.24
67	06 Feb 2020	11.50	0.27
74	13 Feb 2020	13.70	0.31
81	20 Feb 2020	15.40	0.24
88	27 Feb 2020	17.90	0.36
95	05 Mar 2020	20.00	0.30
102	12 Mar 2020	21.70	0.24

FEED DATA

Daily Feed Chart

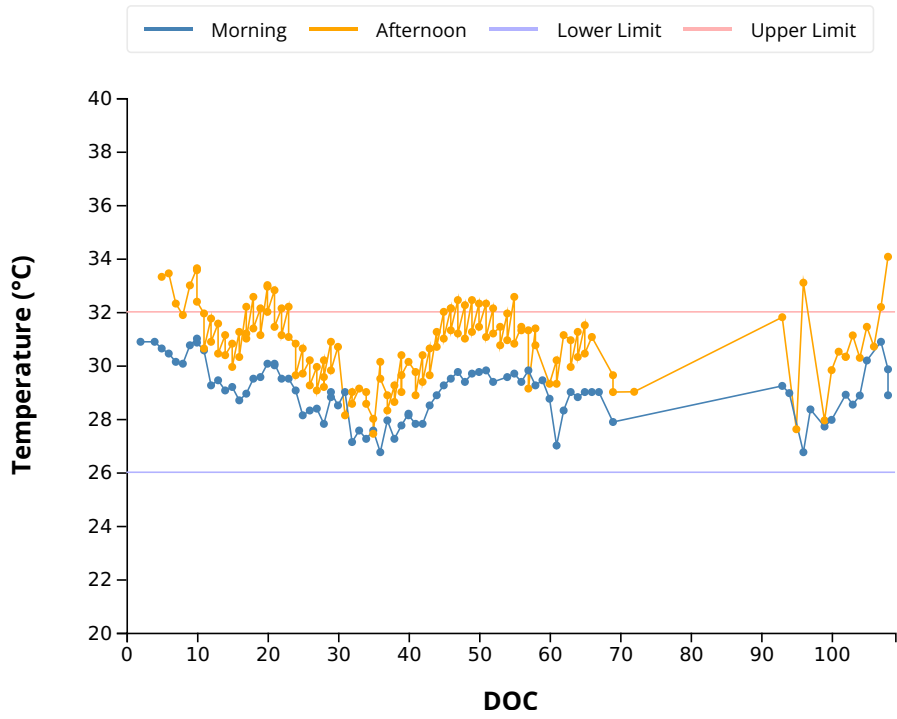


Notes

✔ Feed Accumulation **4,664 kg**

WATER QUALITY DATA

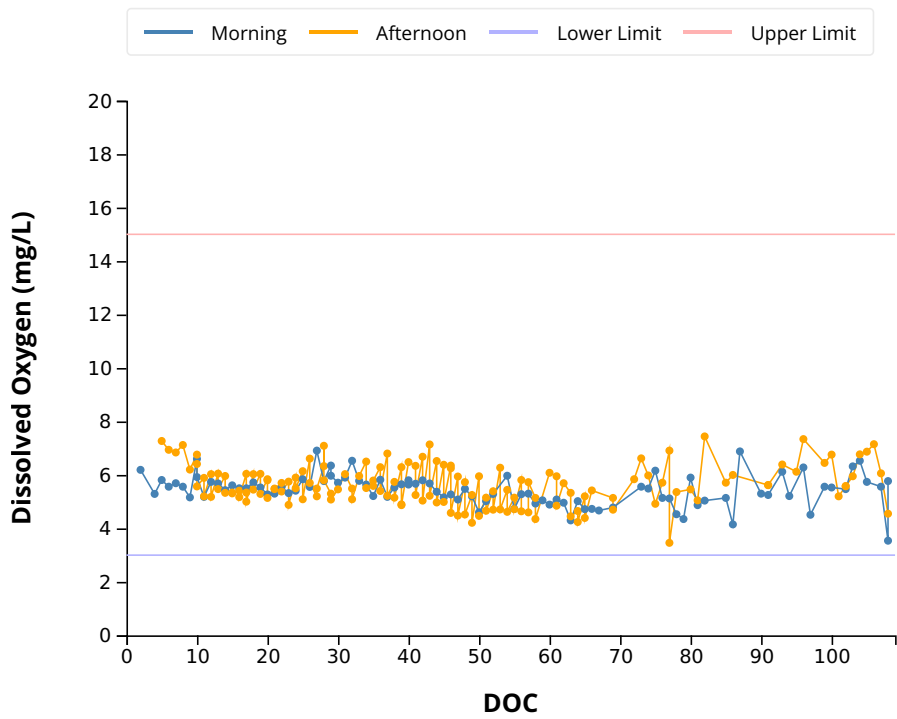
Daily Temperature Chart



Notes

⚠ **temperature is less ideal**
Ideal range (26 - 32°C)

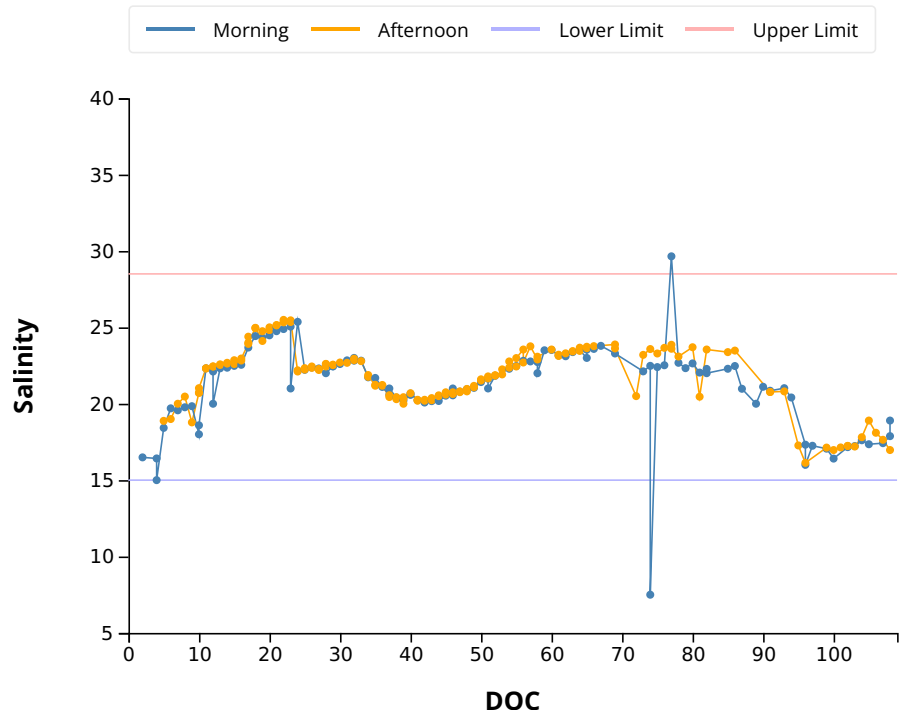
Daily Dissolved Oxygen Chart



Notes

✔ **Dissolved Oxygen is ideal**
Ideal range (3 - 15mg/L)

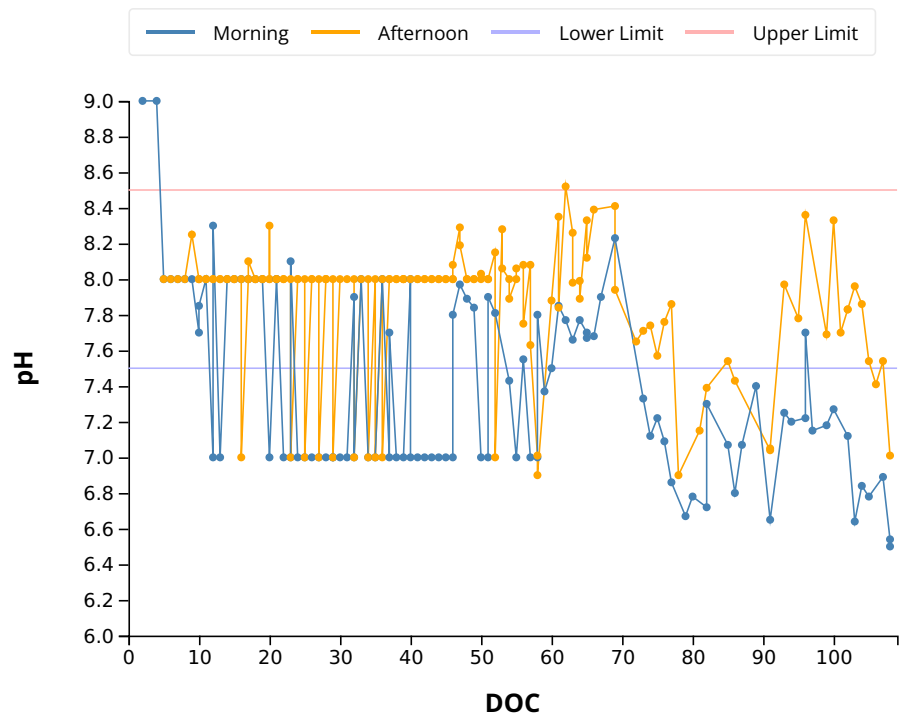
Daily Salinity Chart



Notes

✔ **Salinity is ideal**
Ideal range (15 - 28.5)

Daily pH Chart



Notes

⚠ **ph is less ideal**
Ideal range (7.5 - 8.5)

CULTIVATION REPORT

#002 - INDMIRA - PURWOREJO

Kolam T3







Pond performance is good

RFID: BEE2C5DF

Farm Location	:	JAWA TENGAH, PURWOREJO, GRABAG
Pond name/number	:	Kolam T3
Started at	:	02 December 2019
Total seed (tail)	:	100,000
Seeds density (ind/m²)	:	103
Pond area (m²)	:	973
Pond depth (m)	:	1.1
Biomass limit (kg/m²)	:	1.25
Harvest date (DOC)	:	20 March 2020 (110)

FCR	:	1.342	Total harvest biomass (kg)	:	2,358
SR (%)	:	116.283	Total feed (kg)	:	3,165
Last MBW (gram)	:	22	Shrimp last size	:	45

SUMMARY

-  The harvest result is good based on the survival rate (SR) and shrimp size.
-  The survival rate (SR) is good ($\geq 80\%$).
-  The final result of FCR is not ideal.
-  The water quality is not yet stable.
-  Carrying capacity not yet considered well.
-  Shrimp growth rate is not good.

Input:

- Evaluate the feed program and while considering shrimp appetite.
- Perform water quality management so that it is within the optimal range for shrimp growth. The impact can increase appetite, growth, and the value of survival rate (SR).
- Perform carrying capacity by considering the shrimp density, depth of ponds, and the number of water wheels.

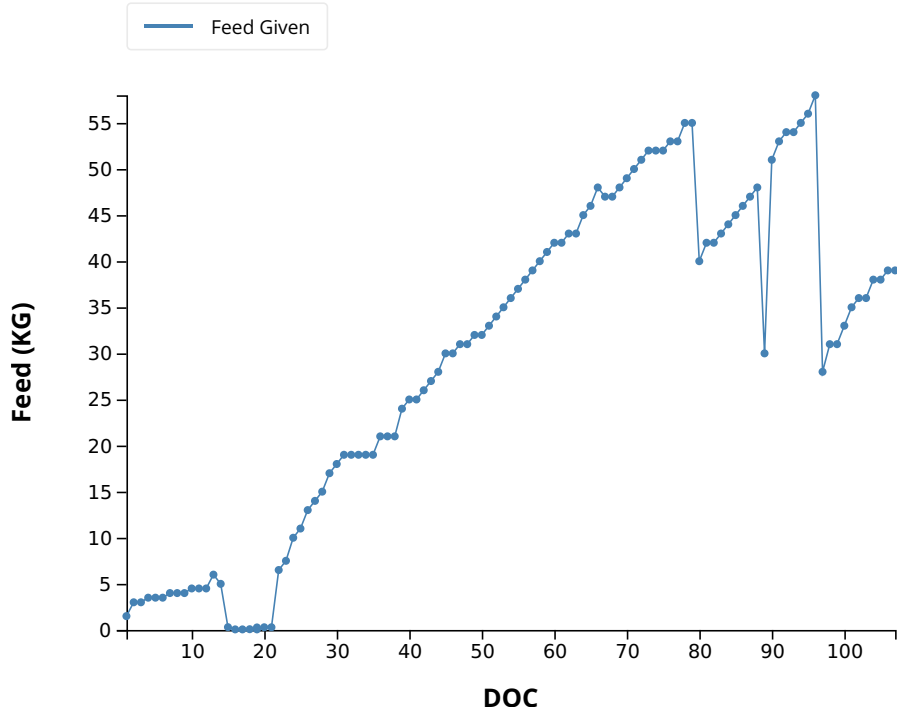
DATA SAMPLING

The following are sampling data collection. There are 11 samplings in 1 cycle with MBW and ADG calculation as follows.

Age	Date	MBW (gram)	ADG (gram/day)
32	02 Jan 2020	2.60	0.00
39	09 Jan 2020	4.10	0.21
46	16 Jan 2020	5.80	0.24
53	23 Jan 2020	8.00	0.31
60	30 Jan 2020	9.80	0.26
67	06 Feb 2020	12.20	0.34
74	13 Feb 2020	14.30	0.30
81	20 Feb 2020	16.70	0.34
88	27 Feb 2020	18.90	0.31
95	05 Mar 2020	20.00	0.16
102	12 Mar 2020	22.20	0.31

FEED DATA

Daily Feed Chart

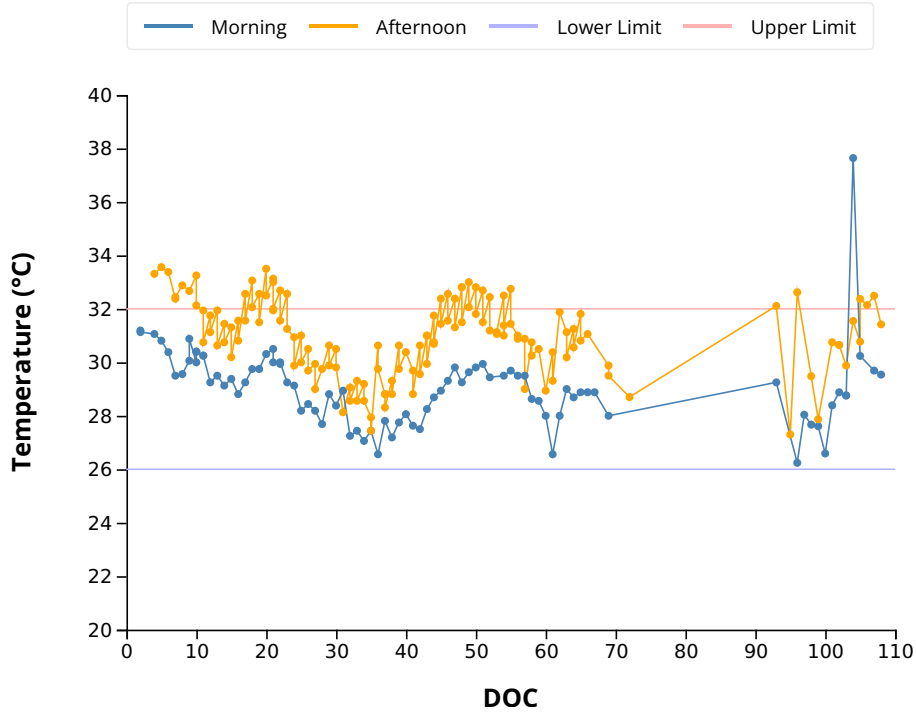


Notes

✔ Feed Accumulation **3,165 kg**

WATER QUALITY DATA

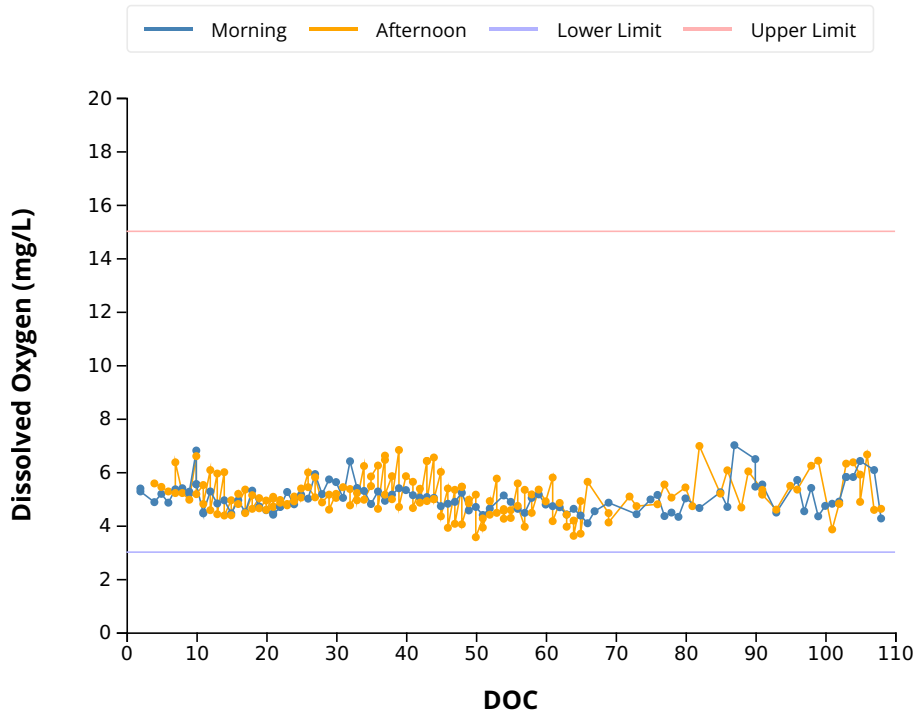
Daily Temperature Chart



Notes

⚠ **temperature is less ideal**
Ideal range (26 - 32°C)

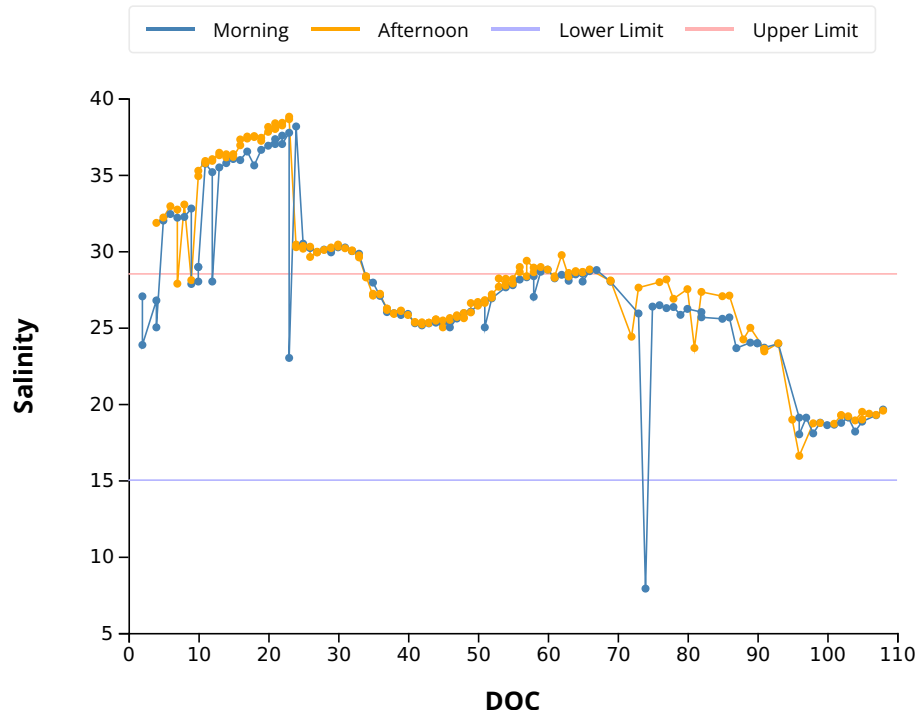
Daily Dissolved Oxygen Chart



Notes

✔ **Dissolved Oxygen is ideal**
Ideal range (3 - 15mg/L)

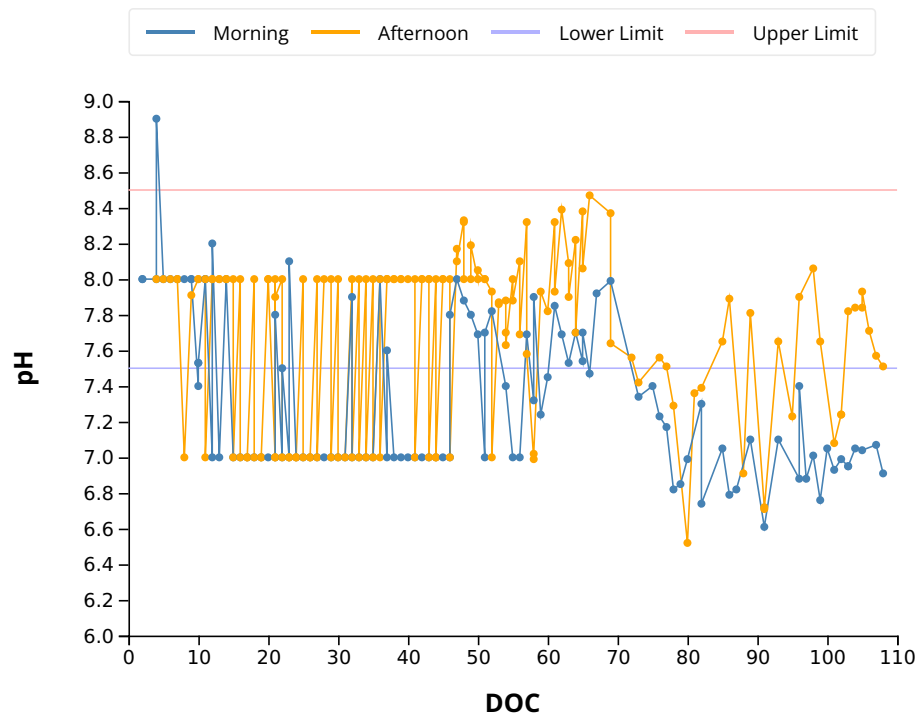
Daily Salinity Chart



Notes

salinity is less ideal
Ideal range (15 - 28.5)

Daily pH Chart

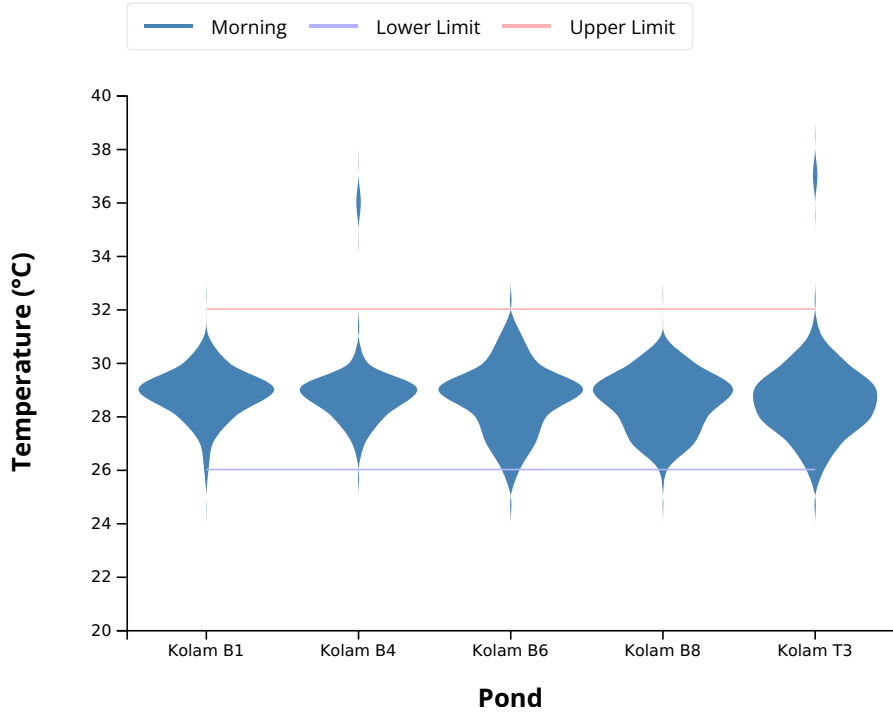


Notes

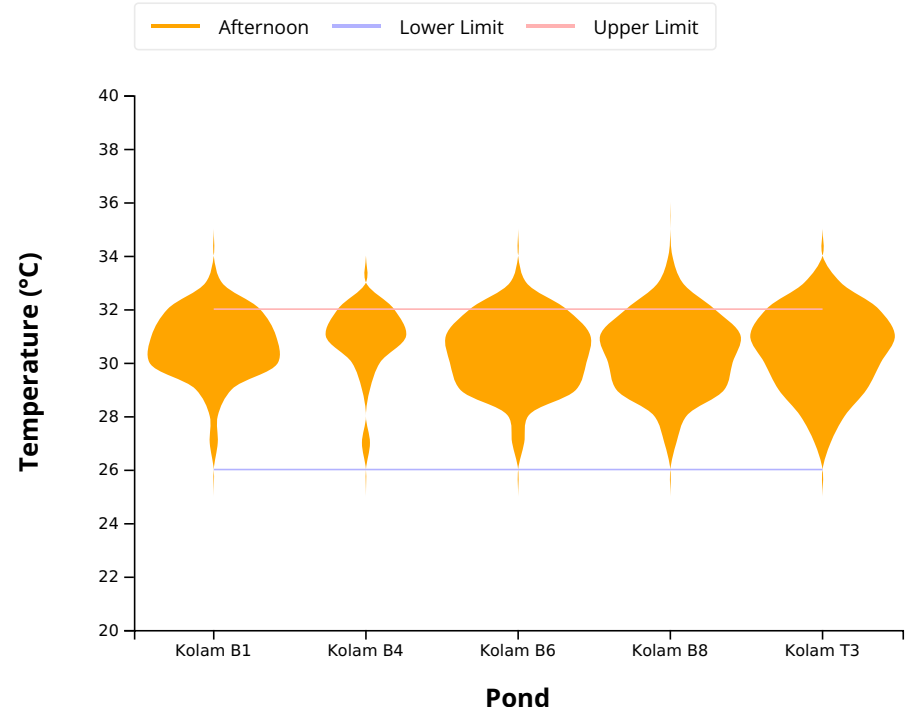
ph is less ideal
Ideal range (7.5 - 8.5)

ATTACHMENTS

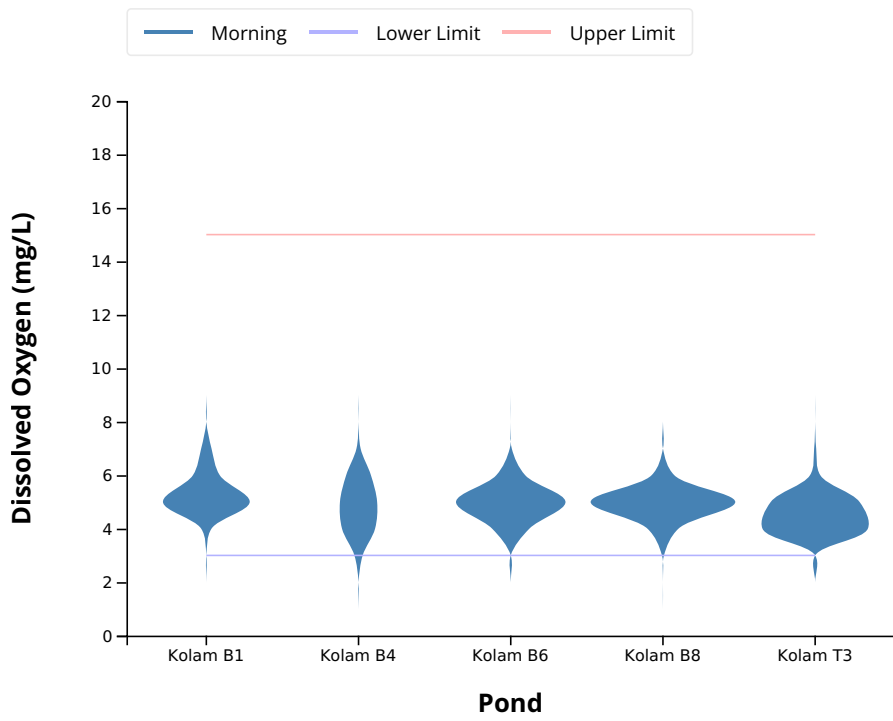
Daily Morning Temperature Measurement Density



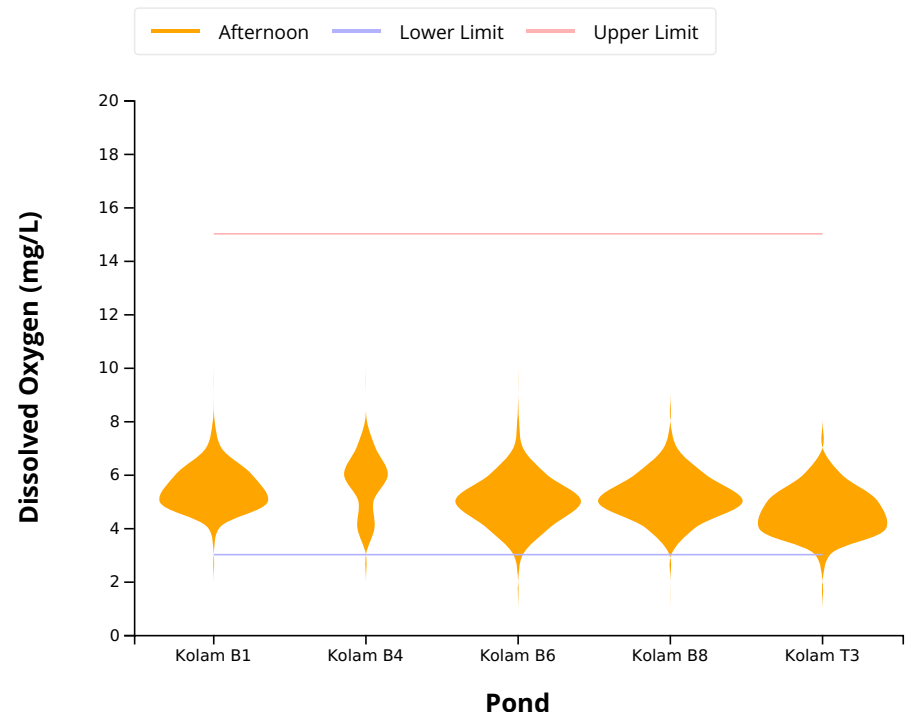
Daily Afternoon Temperature Measurement Density



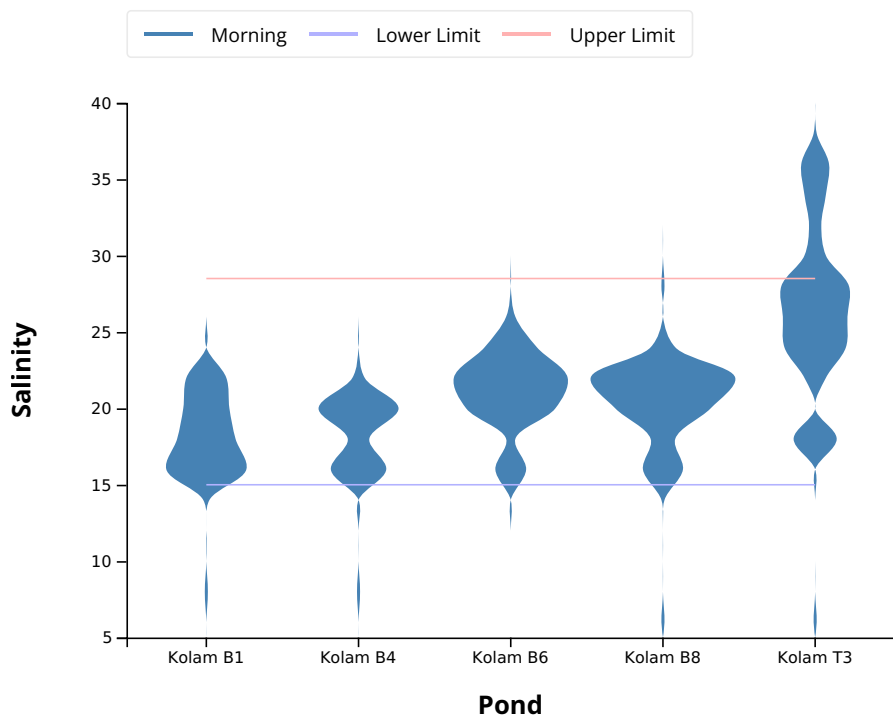
Daily Morning Dissolved Oxygen Measurement Density



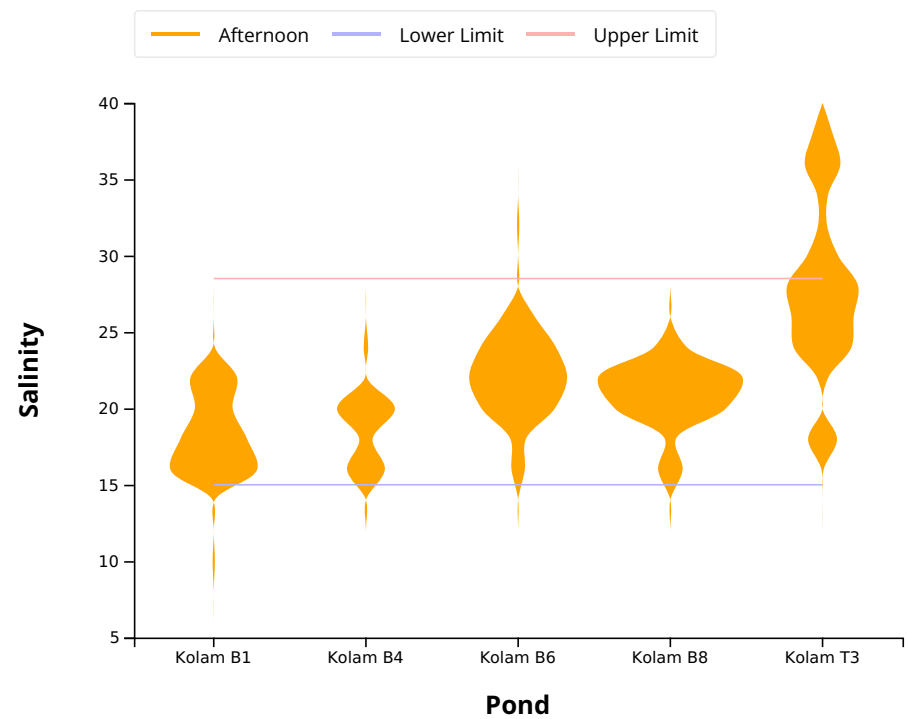
Daily Afternoon Dissolved Oxygen Measurement Density



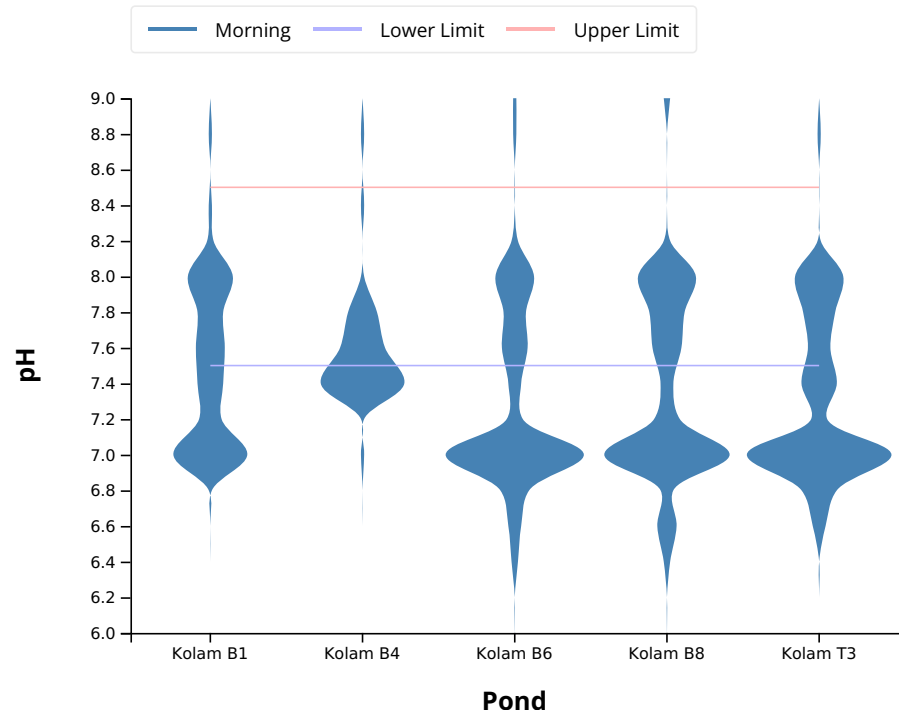
Daily Morning Salinity Measurement Density



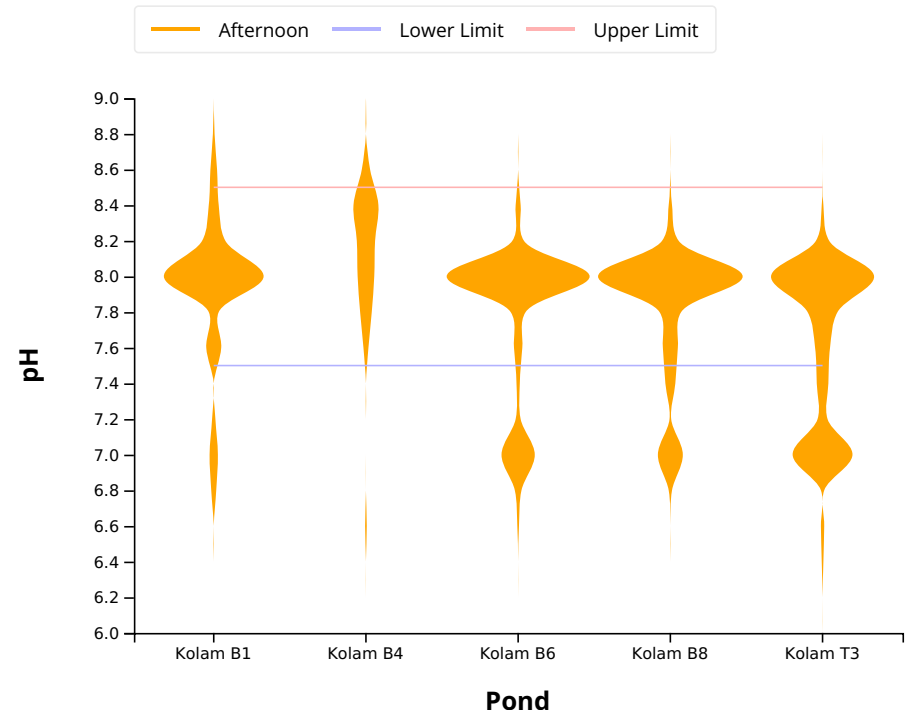
Daily Afternoon Salinity Measurement Density



Daily Morning pH Measurement Density



Daily Afternoon pH Measurement Density



Notes

1. The width of the diagram to the top shows the distribution of the measured values.
2. The width of the diagram to the side shows how often the value appears.