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Soil greenhouse gas fluxes from tropical coastal wetlands and alternative agricultural land uses

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Section S1. Greenhouse gas emissions from tropical coastal wetlands and agricultural lands across an annual seasonal cycle

Land use	Season	Sampling dates	Replicate	CO_2 (mg/m^2/h)	CH_4 (µg/m^2/h)	N_2O-N (µg/m^2/h)
Mangroves	Dry-Cool	17-06-2018	1	153.42	7.12	2.49
Mangroves	Dry-Cool	17-06-2018	2	139.32	9.31	0.00
Mangroves	Dry-Cool	17-06-2018	3	178.25	14.09	0.00
Mangroves	Dry-Cool	31-05-2019	1	146.94	78.67	-10.25
Mangroves	Dry-Cool	31-05-2019	2	132.27	272.39	-15.68
Mangroves	Dry-Cool	31-05-2019	3	119.56	370.68	-4.67
Mangroves	Dry-Cool	31-05-2019	4	137.18	232.47	-7.90
Mangroves	Dry-Cool	31-05-2019	5	131.42	102.86	-16.38
Mangroves	Dry-Cool	01-06-2019	6	71.14	30.14	-50.36
Mangroves	Dry-Cool	01-06-2019	7	129.54	35.42	-31.14
Mangroves	Dry-Cool	01-06-2019	8	119.48	59.05	-21.42
Mangroves	Dry-Cool	01-06-2019	9	81.78	25.20	-5.55
Mangroves	Dry-Cool	01-06-2019	10	123.94	201.65	-1.82
Mangroves	Dry-Cool	02-06-2019	11	98.48	77.93	-48.72
Mangroves	Dry-Cool	02-06-2019	12	97.29	228.97	-18.23
Mangroves	Dry-Cool	02-06-2019	13	61.34	54.64	-24.34
Mangroves	Dry-Cool	02-06-2019	14	58.67	166.59	-19.31
Mangroves	Dry-Cool	02-06-2019	15	82.47	175.88	-19.50
Saltmarsh	Dry-Cool	17-06-2018	1	11.32	-9.17	2.67
Saltmarsh	Dry-Cool	17-06-2018	2	5.98	-10.60	2.65
Saltmarsh	Dry-Cool	17-06-2018	3	9.38	-12.73	2.79
Saltmarsh	Dry-Cool	31-05-2019	1	-58.47	-2.66	7.00
Saltmarsh	Dry-Cool	31-05-2019	2	-97.08	-2.70	3.45
Saltmarsh	Dry-Cool	31-05-2019	3	-60.19	0.65	1.28
Saltmarsh	Dry-Cool	31-05-2019	4	-72.93	-3.29	0.54
Saltmarsh	Dry-Cool	31-05-2019	5	0.99	2.40	7.24
Saltmarsh	Dry-Cool	01-06-2019	6	-82.09	-5.65	4.29
Saltmarsh	Dry-Cool	01-06-2019	7	-40.11	-14.99	0.72
Saltmarsh	Dry-Cool	01-06-2019	8	-24.60	-2.14	2.83
Saltmarsh	Dry-Cool	01-06-2019	9	-65.84	-23.46	5.08
Saltmarsh	Dry-Cool	01-06-2019	10	-66.18	-1.35	4.21
Saltmarsh	Dry-Cool	02-06-2019	11	-68.59	-12.05	10.13
Saltmarsh	Dry-Cool	02-06-2019	12	-37.39	-1.95	7.49
Saltmarsh	Dry-Cool	02-06-2019	13	14.18	-5.07	15.07
Saltmarsh	Dry-Cool	02-06-2019	14	-27.15	-7.55	-1.24
Saltmarsh	Dry-Cool	02-06-2019	15	-15.00	-1.67	9.17
FW tidal wetland	Dry-Cool	31-05-2019	1	246.11	102.83	-1.03

FW tidal wetland	Dry-Cool	31-05-2019	2	218.41	82.70	0.35
FW tidal wetland	Dry-Cool	31-05-2019	3	253.00	53.82	4.93
FW tidal wetland	Dry-Cool	31-05-2019	4	218.29	150.71	1.56
FW tidal wetland	Dry-Cool	31-05-2019	5	236.02	54.02	0.43
FW tidal wetland	Dry-Cool	01-06-2019	6	49.24	26.56	-7.44
FW tidal wetland	Dry-Cool	01-06-2019	7	55.55	0.60	-2.13
FW tidal wetland	Dry-Cool	01-06-2019	8	49.79	16.67	3.55
FW tidal wetland	Dry-Cool	01-06-2019	9	55.87	11.93	12.28
FW tidal wetland	Dry-Cool	01-06-2019	10	40.42	73.27	3.24
FW tidal wetland	Dry-Cool	02-06-2019	11	117.89	26.70	-6.74
FW tidal wetland	Dry-Cool	02-06-2019	12	99.34	60.78	7.92
FW tidal wetland	Dry-Cool	02-06-2019	13	81.41	9.96	2.14
FW tidal wetland	Dry-Cool	02-06-2019	14	75.49	19.03	2.69
FW tidal wetland	Dry-Cool	02-06-2019	15	58.28	-1.73	1.27
Sugarcane	Dry-Cool	17-06-2018	1	68.18	-25.35	-5.54
Sugarcane	Dry-Cool	17-06-2018	2	47.88	-18.16	-8.67
Sugarcane	Dry-Cool	17-06-2018	3	61.81	-27.45	-12.01
Sugarcane	Dry-Cool	31-05-2019	1	125.50	-14.81	-3.85
Sugarcane	Dry-Cool	31-05-2019	2	100.44	3.54	-9.61
Sugarcane	Dry-Cool	31-05-2019	3	112.37	3.36	-5.97
Sugarcane	Dry-Cool	31-05-2019	4	132.08	-14.73	-5.05
Sugarcane	Dry-Cool	31-05-2019	5	137.19	2.56	-7.67
Sugarcane	Dry-Cool	01-06-2019	6	30.28	-4.20	-5.46
Sugarcane	Dry-Cool	01-06-2019	7	35.29	-9.78	-4.02
Sugarcane	Dry-Cool	01-06-2019	8	28.36	-12.15	-3.78
Sugarcane	Dry-Cool	01-06-2019	9	30.11	-15.07	-4.39
Sugarcane	Dry-Cool	01-06-2019	10	37.91	-14.45	-4.45
Sugarcane	Dry-Cool	02-06-2019	11	32.49	-9.56	-5.46
Sugarcane	Dry-Cool	02-06-2019	12	38.04	-10.30	-4.02
Sugarcane	Dry-Cool	02-06-2019	13	17.73	-9.66	-3.78
Sugarcane	Dry-Cool	02-06-2019	14	12.89	-9.73	-4.39
Sugarcane	Dry-Cool	02-06-2019	15	15.58	-9.86	-4.45
Dry ponded pasture	Dry-Cool	05-06-2019	1	319.57	6.13	170.50
Dry ponded pasture	Dry-Cool	05-06-2019	2	480.56	14.61	122.49
Dry ponded pasture	Dry-Cool	05-06-2019	3	213.81	12.87	152.50
Dry ponded pasture	Dry-Cool	05-06-2019	4	499.73	11.36	178.40
Dry ponded pasture	Dry-Cool	05-06-2019	5	949.72	25.15	393.89
Dry ponded pasture	Dry-Cool	06-06-2019	6	418.45	18.95	66.82
Dry ponded pasture	Dry-Cool	06-06-2019	7	336.48	4.88	18.14

Dry ponded pasture	Dry-Cool	06-06-2019	8	379.92	-9.66	19.75
Dry ponded pasture	Dry-Cool	06-06-2019	9	593.20	46.20	335.94
Dry ponded pasture	Dry-Cool	06-06-2019	10	529.93	-16.29	239.77
Wet ponded pasture	Dry-Cool	05-06-2019	1	19.59	2957.20	36.77
Wet ponded pasture	Dry-Cool	05-06-2019	2	88.75	26108.86	54.19
Wet ponded pasture	Dry-Cool	05-06-2019	3	41.55	26870.72	27.77
Wet ponded pasture	Dry-Cool	05-06-2019	4	45.92	17183.93	41.80
Wet ponded pasture	Dry-Cool	05-06-2019	5	17.03	2338.01	29.94
Wet ponded pasture	Dry-Cool	06-06-2019	6	30.32	7713.55	17.85
Wet ponded pasture	Dry-Cool	06-06-2019	7	9.38	10881.02	23.61
Wet ponded pasture	Dry-Cool	06-06-2019	8	48.74	10855.72	5.88
Wet ponded pasture	Dry-Cool	06-06-2019	9	52.98	8161.26	21.35
Wet ponded pasture	Dry-Cool	06-06-2019	10	14.21	9212.73	22.64
Mangroves	Dry-Hot	24-10-2018	1	122.95	17.59	17.49
Mangroves	Dry-Hot	24-10-2018	2	83.77	15.55	13.71
Mangroves	Dry-Hot	24-10-2018	3	156.79	17.47	22.29
Mangroves	Dry-Hot	26-10-2018	4	144.06	26.38	32.33
Mangroves	Dry-Hot	26-10-2018	5	109.13	16.90	23.58
Mangroves	Dry-Hot	26-10-2018	6	231.75	15.40	26.85
Mangroves	Dry-Hot	28-10-2018	7	125.14	5.02	8.79
Mangroves	Dry-Hot	28-10-2018	8	122.58	8.76	14.02
Mangroves	Dry-Hot	28-10-2018	9	132.31	16.14	9.31
Saltmarsh	Dry-Hot	24-10-2018	1	-56.84	-14.34	17.36
Saltmarsh	Dry-Hot	24-10-2018	2	-59.13	-14.83	58.67
Saltmarsh	Dry-Hot	24-10-2018	3	-53.74	-9.51	81.55
Saltmarsh	Dry-Hot	26-10-2018	4	-44.59	-5.58	20.49
Saltmarsh	Dry-Hot	26-10-2018	5	-56.56	-8.36	95.44
Saltmarsh	Dry-Hot	26-10-2018	6	-38.79	-9.90	165.84
Saltmarsh	Dry-Hot	28-10-2018	7	-30.99	-10.67	20.48
Saltmarsh	Dry-Hot	28-10-2018	8	-40.01	-2.00	77.71
Saltmarsh	Dry-Hot	28-10-2018	9	-65.88	-4.57	122.06
FW tidal wetland	Dry-Hot	24-10-2018	1	237.06	4.53	7.58
FW tidal wetland	Dry-Hot	24-10-2018	2	282.37	10.54	1.75
FW tidal wetland	Dry-Hot	24-10-2018	3	212.06	7.19	1.60
FW tidal wetland	Dry-Hot	26-10-2018	4	199.74	7.09	1.91
FW tidal wetland	Dry-Hot	26-10-2018	5	96.87	5.17	5.38

FW tidal wetland	Dry-Hot	26-10-2018	6	264.12	5.15	7.49
FW tidal wetland	Dry-Hot	28-10-2018	7	288.33	11.72	7.83
FW tidal wetland	Dry-Hot	28-10-2018	8	219.64	1.14	3.21
FW tidal wetland	Dry-Hot	28-10-2018	9	354.09	3.53	2.34
Sugarcane	Dry-Hot	24-10-2018	1	202.01	22.56	801.12
Sugarcane	Dry-Hot	24-10-2018	2	205.76	3.22	8.41
Sugarcane	Dry-Hot	24-10-2018	3	112.32	11.54	574.39
Sugarcane	Dry-Hot	26-10-2018	4	159.31	3.01	317.65
Sugarcane	Dry-Hot	26-10-2018	5	84.91	1.38	464.92
Sugarcane	Dry-Hot	26-10-2018	6	188.37	1.32	667.65
Sugarcane	Dry-Hot	28-10-2018	7	128.34	9.10	446.05
Sugarcane	Dry-Hot	28-10-2018	8	157.68	14.41	421.80
Sugarcane	Dry-Hot	28-10-2018	9	208.40	12.35	503.70
Dry ponded pasture	Dry-Hot	23-10-2018	1	737.82	3.59	4.14
Dry ponded pasture	Dry-Hot	23-10-2018	2	877.98	-0.08	8.69
Dry ponded pasture	Dry-Hot	25-10-2018	3	610.17	4.24	8.54
Dry ponded pasture	Dry-Hot	25-10-2018	4	648.86	3.94	7.45
Dry ponded pasture	Dry-Hot	25-10-2018	5	541.33	10.42	16.56
Dry ponded pasture	Dry-Hot	27-10-2018	6	744.15	5.33	5.24
Dry ponded pasture	Dry-Hot	27-10-2018	7	721.74	3.54	11.94
Dry ponded pasture	Dry-Hot	27-10-2018	8	477.30	5.23	14.31
Dry ponded pasture	Dry-Hot	29-10-2018	9	549.06	9.98	6.21
Dry ponded pasture	Dry-Hot	29-10-2018	10	703.69	2.52	1.87
Dry ponded pasture	Dry-Hot	29-10-2018	11	648.71	2.35	11.65
Wet ponded pasture	Dry-Hot	23-10-2018	1	739.48	94514.74	119.21
Wet ponded pasture	Dry-Hot	23-10-2018	2	639.16	100316.66	94.05
Wet ponded pasture	Dry-Hot	25-10-2018	3	469.04	59077.07	132.10
Wet ponded pasture	Dry-Hot	25-10-2018	4	400.71	27306.52	70.47
Wet ponded pasture	Dry-Hot	25-10-2018	5	514.59	25270.21	119.84
Wet ponded pasture	Dry-Hot	27-10-2018	6	506.21	33480.44	436.95
Wet ponded pasture	Dry-Hot	27-10-2018	7	660.90	23772.51	335.70
Wet ponded pasture	Dry-Hot	27-10-2018	8	728.68	14353.43	332.28

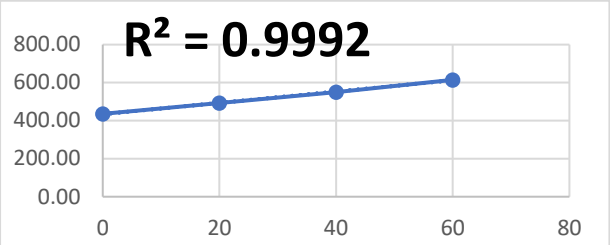
Wet ponded pasture	Dry-Hot	29-10-2018	9	562.20	40968.53	716.23
Wet ponded pasture	Dry-Hot	29-10-2018	10	392.95	42638.00	147.24
Wet ponded pasture	Dry-Hot	29-10-2018	11	430.43	56203.81	276.61
Mangroves	Wet-Hot	20-02-2020	1	500.77	278.14	-8.22
Mangroves	Wet-Hot	20-02-2020	2	322.10	300.67	-3.20
Mangroves	Wet-Hot	20-02-2020	3	371.71	181.10	-3.30
Mangroves	Wet-Hot	20-02-2020	4	295.57	284.73	-12.19
Mangroves	Wet-Hot	20-02-2020	5	410.98	189.51	-9.26
Mangroves	Wet-Hot	21-02-2020	6	229.03	131.69	-1.58
Mangroves	Wet-Hot	21-02-2020	7	177.11	106.45	-3.30
Mangroves	Wet-Hot	21-02-2020	8	153.63	136.09	-5.96
Mangroves	Wet-Hot	21-02-2020	9	120.04	154.01	-1.27
Mangroves	Wet-Hot	21-02-2020	10	254.00	163.27	-4.10
Mangroves	Wet-Hot	22-02-2020	11	98.83	53.81	-6.10
Mangroves	Wet-Hot	22-02-2020	12	207.55	172.75	-0.41
Mangroves	Wet-Hot	22-02-2020	13	111.29	57.90	-6.67
Mangroves	Wet-Hot	22-02-2020	14	117.96	158.86	-2.81
Mangroves	Wet-Hot	22-02-2020	15	172.60	96.69	-5.32
Saltmarsh	Wet-Hot	20-02-2020	1	-8.57	5.85	-5.97
Saltmarsh	Wet-Hot	20-02-2020	2	-15.61	9.31	-3.41
Saltmarsh	Wet-Hot	20-02-2020	3	-8.65	4.25	-4.24
Saltmarsh	Wet-Hot	20-02-2020	4	-12.75	7.73	-4.86
Saltmarsh	Wet-Hot	20-02-2020	5	-17.80	8.52	-6.26
Saltmarsh	Wet-Hot	21-02-2020	6	-31.07	3.28	-7.51
Saltmarsh	Wet-Hot	21-02-2020	7	-23.40	4.88	-1.61
Saltmarsh	Wet-Hot	21-02-2020	8	-24.09	4.19	-6.67
Saltmarsh	Wet-Hot	21-02-2020	9	-26.89	3.12	-4.18
Saltmarsh	Wet-Hot	21-02-2020	10	-31.55	3.99	-8.48
Saltmarsh	Wet-Hot	22-02-2020	11	-25.73	3.18	-6.12
Saltmarsh	Wet-Hot	22-02-2020	12	-32.44	3.23	-10.06
Saltmarsh	Wet-Hot	22-02-2020	13	-30.24	3.27	-6.30
Saltmarsh	Wet-Hot	22-02-2020	14	-44.95	6.66	-2.94
Saltmarsh	Wet-Hot	22-02-2020	15	-37.26	6.59	-7.46
FW tidal wetland	Wet-Hot	20-02-2020	1	331.22	7.13	4.31
FW tidal wetland	Wet-Hot	20-02-2020	2	327.10	5.75	4.59
FW tidal wetland	Wet-Hot	20-02-2020	3	279.86	5.90	6.18
FW tidal wetland	Wet-Hot	20-02-2020	4	182.69	6.93	0.30
FW tidal wetland	Wet-Hot	20-02-2020	5	273.37	9.36	2.62
FW tidal wetland	Wet-Hot	21-02-2020	6	558.51	7.01	2.38
FW tidal wetland	Wet-Hot	21-02-2020	7	501.67	5.29	0.99
FW tidal wetland	Wet-Hot	21-02-2020	8	421.57	8.39	1.33
FW tidal wetland	Wet-Hot	21-02-2020	9	338.42	1.52	5.78
FW tidal wetland	Wet-Hot	21-02-2020	10	386.81	4.86	4.22

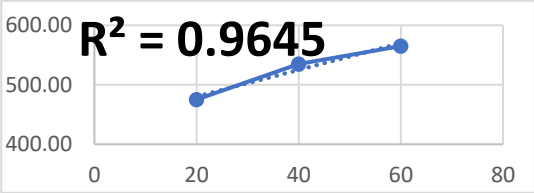
FW tidal wetland	Wet-Hot	22-02-2020	11	734.25	11.77	5.04
FW tidal wetland	Wet-Hot	22-02-2020	12	775.55	7.19	8.84
FW tidal wetland	Wet-Hot	22-02-2020	13	636.64	4.80	9.66
FW tidal wetland	Wet-Hot	22-02-2020	14	552.14	12.15	2.97
FW tidal wetland	Wet-Hot	22-02-2020	15	556.49	9.32	0.68
Sugarcane	Wet-Hot	20-02-2020	1	442.71	-5.67	52.25
Sugarcane	Wet-Hot	20-02-2020	2	440.55	-3.44	55.20
Sugarcane	Wet-Hot	20-02-2020	3	315.90	-2.65	64.68
Sugarcane	Wet-Hot	20-02-2020	4	334.40	-3.20	73.11
Sugarcane	Wet-Hot	20-02-2020	5	304.80	-3.01	49.29
Sugarcane	Wet-Hot	21-02-2020	6	263.65	-12.37	27.16
Sugarcane	Wet-Hot	21-02-2020	7	384.30	-5.57	77.04
Sugarcane	Wet-Hot	21-02-2020	8	313.28	-10.25	69.51
Sugarcane	Wet-Hot	21-02-2020	9	310.01	-7.04	77.07
Sugarcane	Wet-Hot	21-02-2020	10	296.09	-4.36	63.95
Sugarcane	Wet-Hot	22-02-2020	11	99.42	-4.80	17.47
Sugarcane	Wet-Hot	22-02-2020	12	208.02	-1.00	92.02
Sugarcane	Wet-Hot	22-02-2020	13	154.41	-6.28	10.51
Sugarcane	Wet-Hot	22-02-2020	14	242.92	-3.78	38.24
Sugarcane	Wet-Hot	22-02-2020	15	237.91	-1.08	20.29
Dry ponded pasture	Wet-Hot	17-02-2020	1	857.71	39.89	1107.09
Dry ponded pasture	Wet-Hot	17-02-2020	2	1094.43	92.13	1109.65
Dry ponded pasture	Wet-Hot	17-02-2020	3	1040.94	30.20	971.59
Dry ponded pasture	Wet-Hot	17-02-2020	4	945.82	16.73	1072.66
Dry ponded pasture	Wet-Hot	17-02-2020	5	560.33	41.71	942.15
Dry ponded pasture	Wet-Hot	18-02-2020	6	1158.08	69.92	2083.00
Dry ponded pasture	Wet-Hot	18-02-2020	7	1229.24	100.20	1159.77
Dry ponded pasture	Wet-Hot	18-02-2020	8	988.38	34.81	2155.12
Dry ponded pasture	Wet-Hot	18-02-2020	9	759.27	18.88	2101.59
Dry ponded pasture	Wet-Hot	18-02-2020	10	626.26	30.61	1844.24
Dry ponded pasture	Wet-Hot	19-02-2020	11	475.54	27.35	2081.00
Dry ponded pasture	Wet-Hot	19-02-2020	12	795.39	19.12	1789.24
Dry ponded pasture	Wet-Hot	19-02-2020	13	897.41	11.39	1008.19
Dry ponded pasture	Wet-Hot	19-02-2020	14	728.94	15.65	1142.78
Dry ponded pasture	Wet-Hot	19-02-2020	15	534.82	13.75	1150.27

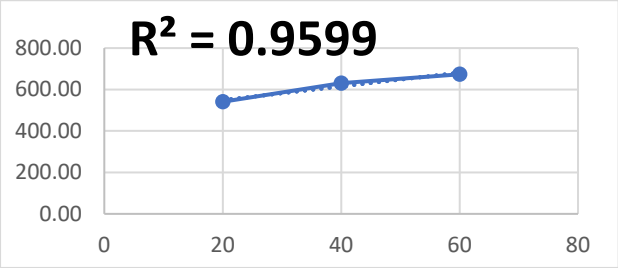
Wet ponded pasture	Wet-Hot	17-02-2020	1	143.09	11476.01	71.91
Wet ponded pasture	Wet-Hot	17-02-2020	2	139.91	9171.85	28.89
Wet ponded pasture	Wet-Hot	17-02-2020	3	109.64	8836.40	46.69
Wet ponded pasture	Wet-Hot	17-02-2020	4	81.09	8351.20	47.71
Wet ponded pasture	Wet-Hot	17-02-2020	5	128.53	10897.51	32.25
Wet ponded pasture	Wet-Hot	18-02-2020	6	222.32	13743.33	16.83
Wet ponded pasture	Wet-Hot	18-02-2020	7	146.23	7376.51	14.89
Wet ponded pasture	Wet-Hot	18-02-2020	8	179.95	11360.45	12.44
Wet ponded pasture	Wet-Hot	18-02-2020	9	143.13	9457.48	16.18
Wet ponded pasture	Wet-Hot	18-02-2020	10	135.01	9512.04	13.46
Wet ponded pasture	Wet-Hot	19-02-2020	11	128.38	11210.00	16.02
Wet ponded pasture	Wet-Hot	19-02-2020	12	146.68	12289.67	8.96
Wet ponded pasture	Wet-Hot	19-02-2020	13	142.43	10170.75	12.39
Wet ponded pasture	Wet-Hot	19-02-2020	14	108.85	12721.08	17.51
Wet ponded pasture	Wet-Hot	19-02-2020	15	137.86	15532.15	18.83

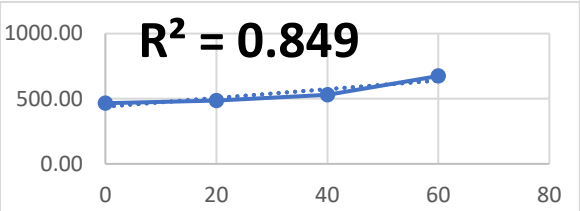
Section S2-A. Supplementary data for linearity test results during Dry-hot season

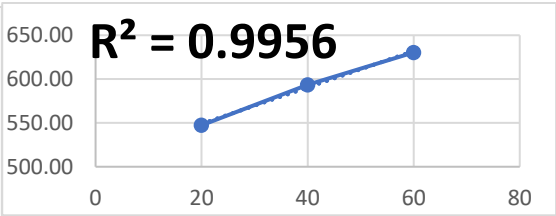
Mangroves- CO2

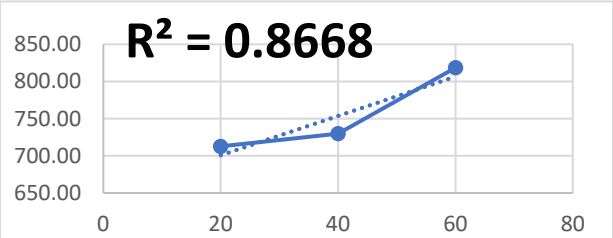


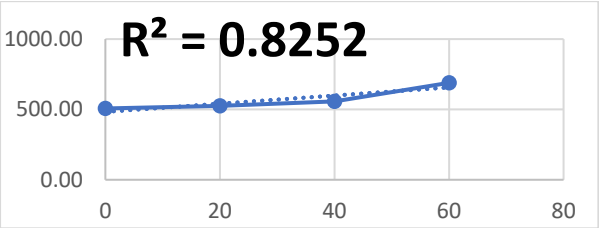


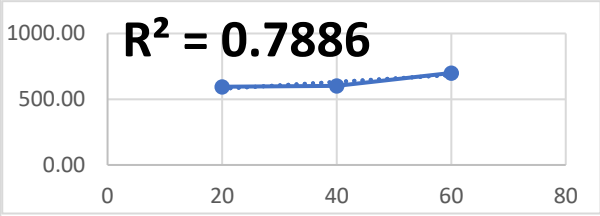


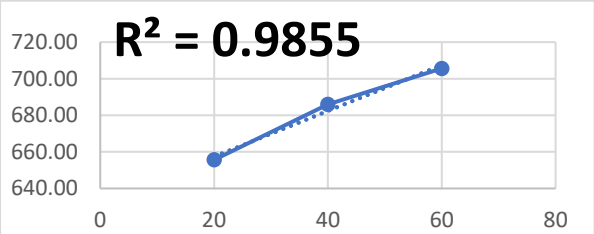




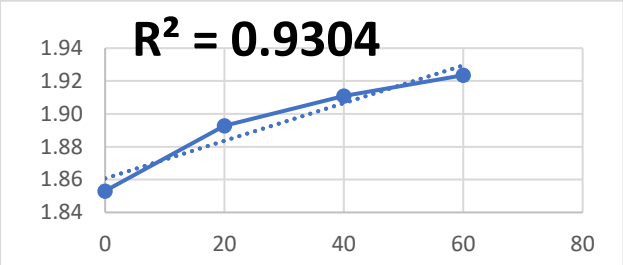


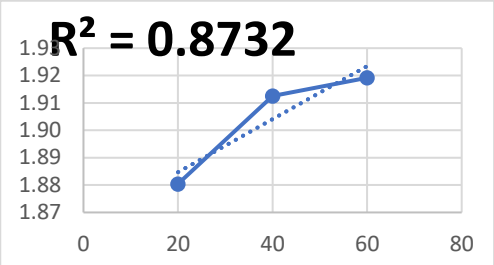


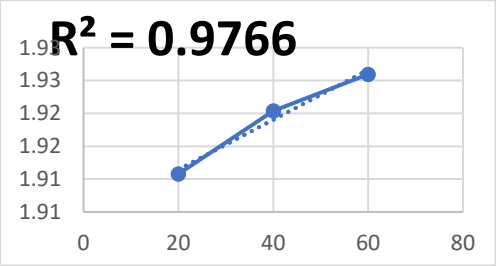


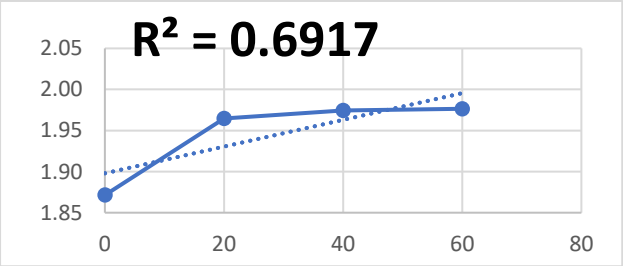


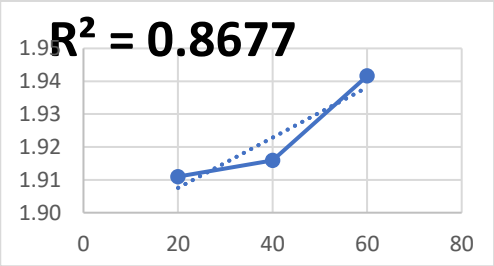
Mangroves- CH4

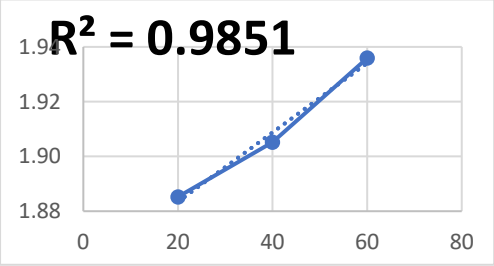


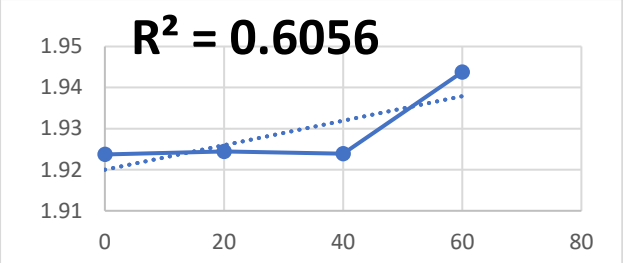


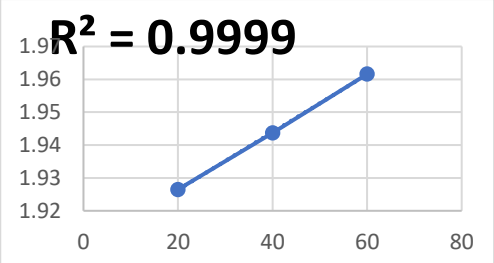


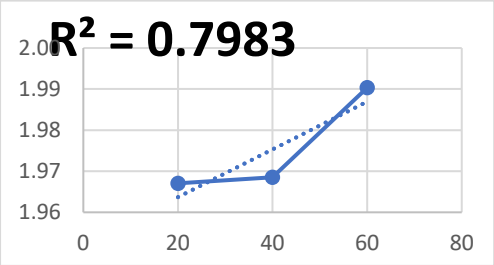




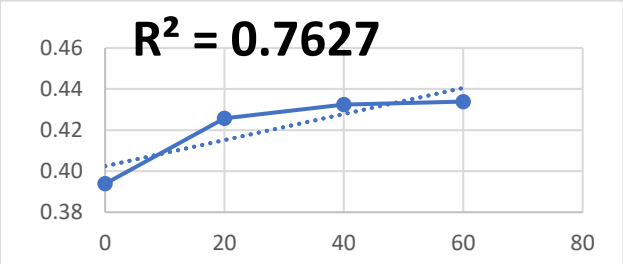


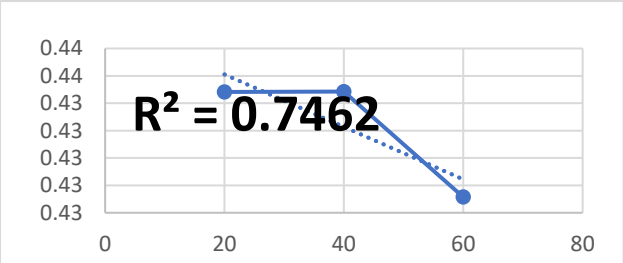


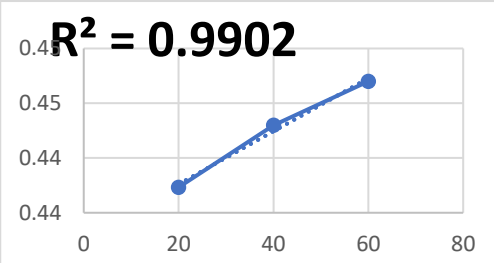


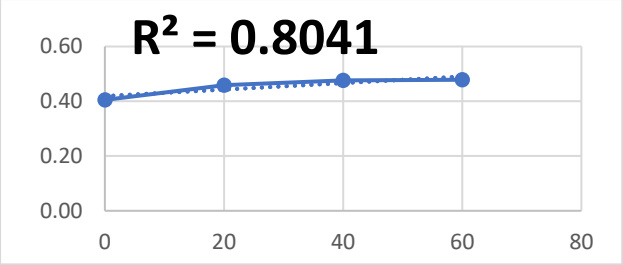


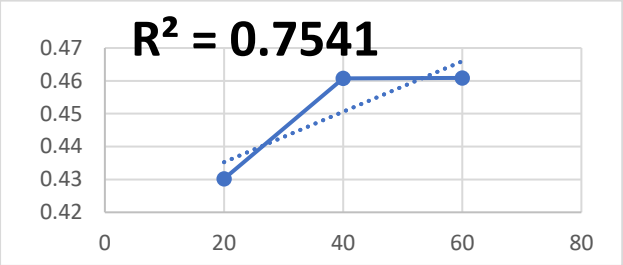
Mangroves- N2O

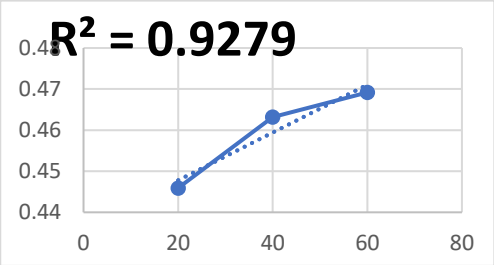


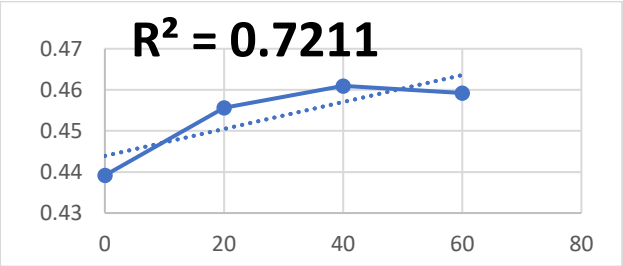


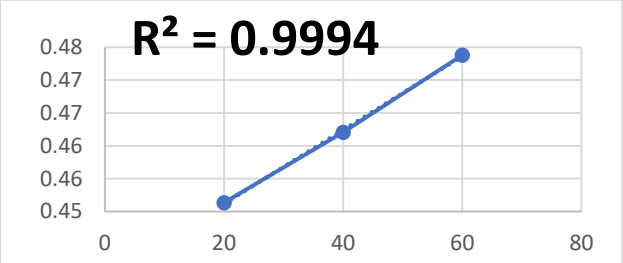


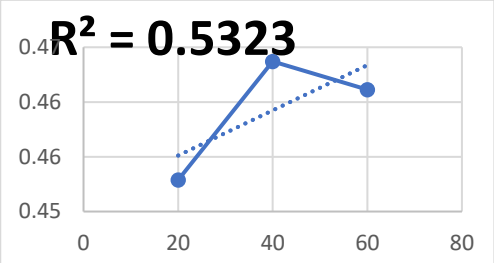




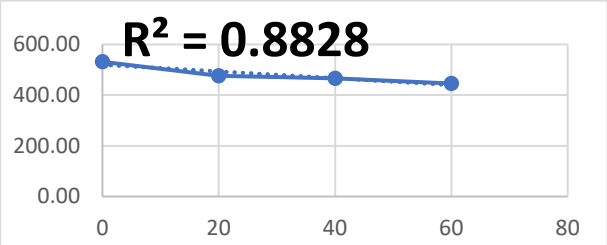


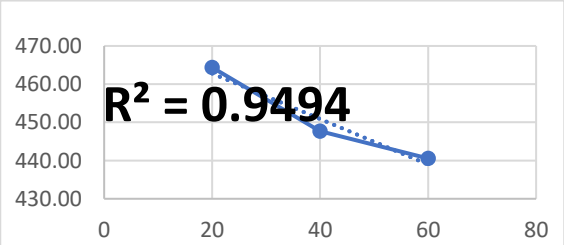


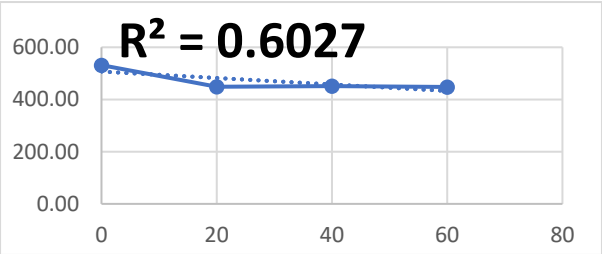


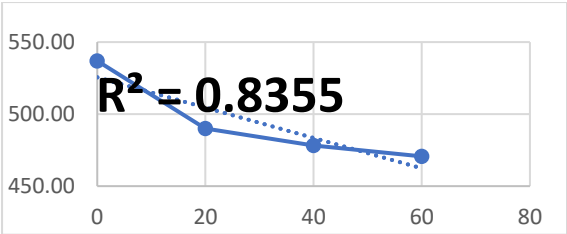


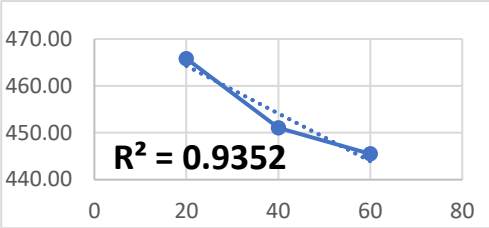
Saltmarsh- CO2

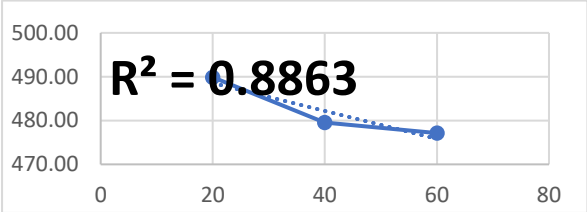


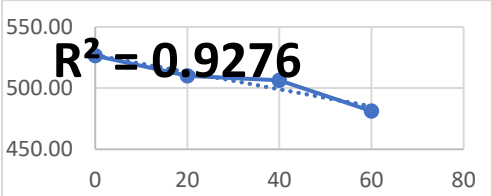


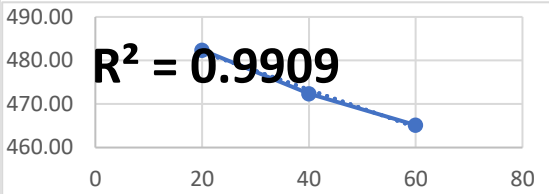


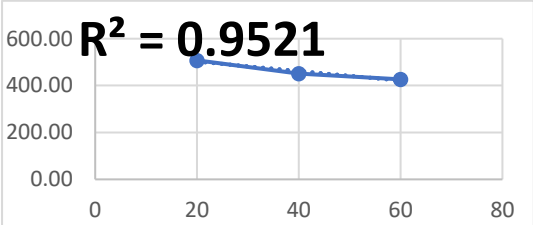




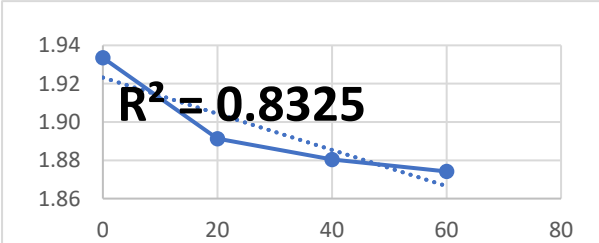


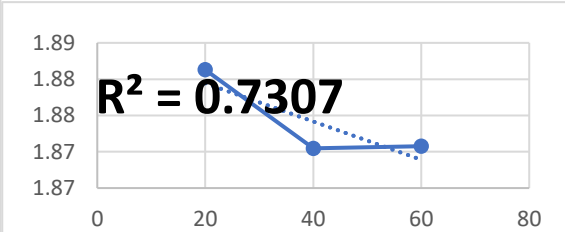


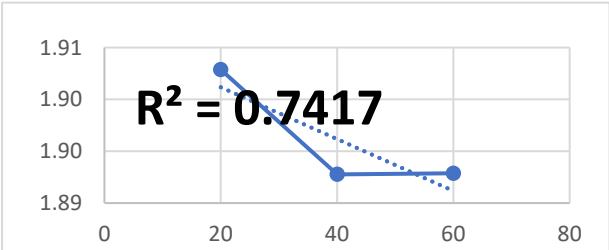


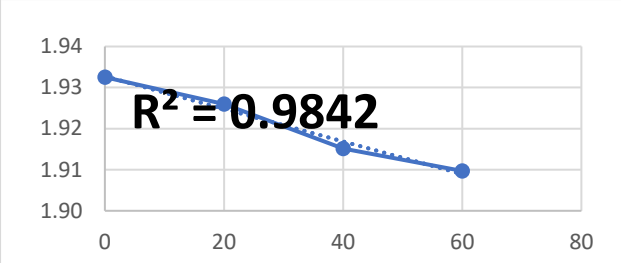


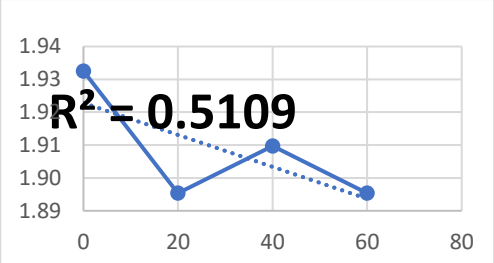
Saltmarsh- CH4

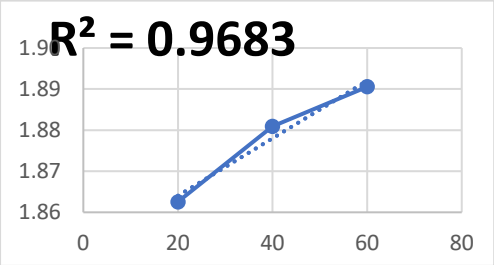


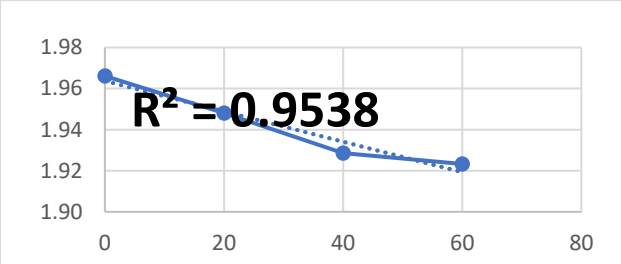


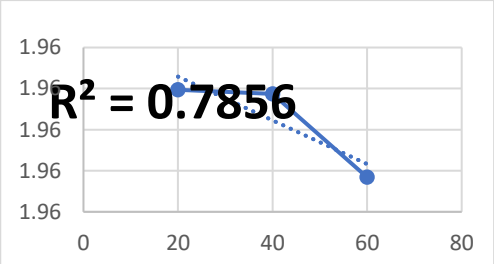


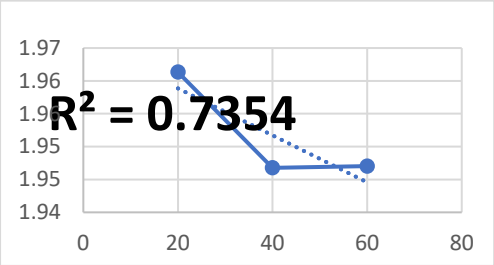




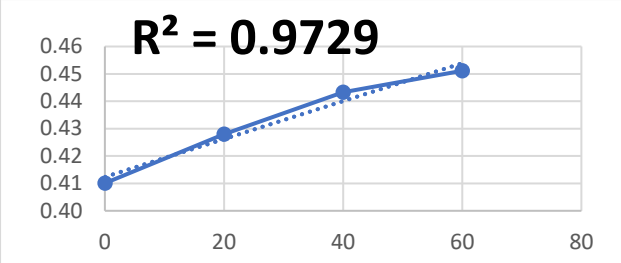








Saltmarsh- N2O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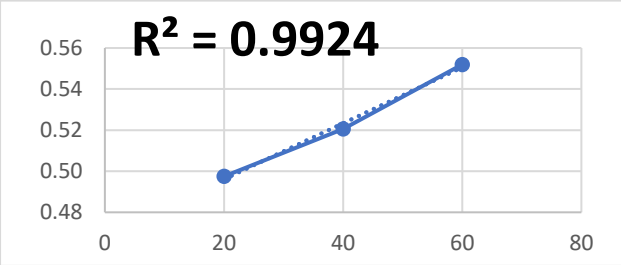
0.45
0.44
0.43
0.42
0.41
0.40
0
20
40
60
80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0.48
0
20
40
60
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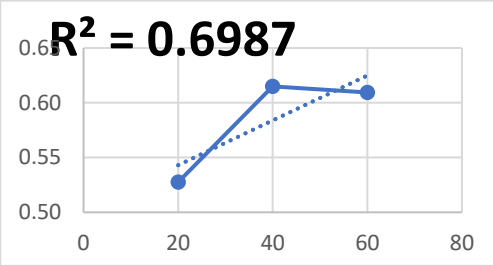
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0.50
0
20
40
60
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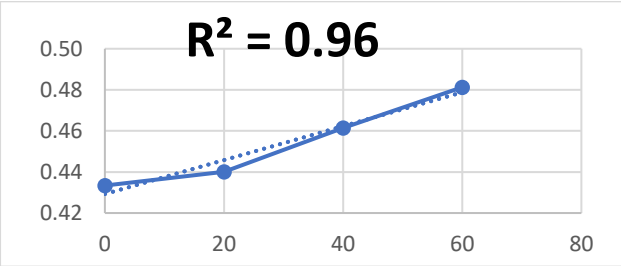
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0.44
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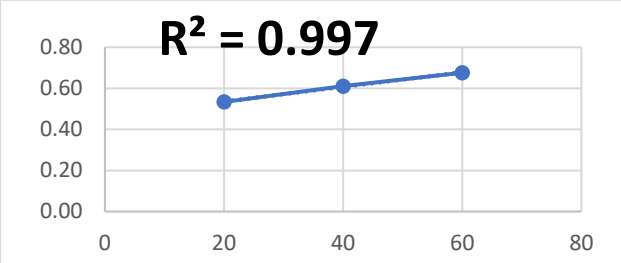
40
60
80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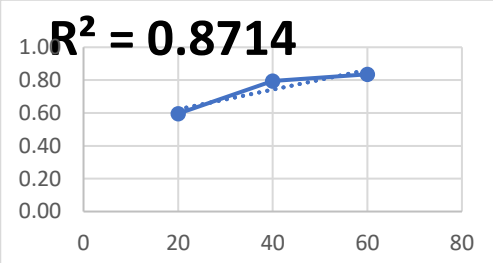
0.60
0.40
0.20
0.00
0
20
40
60
80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0.20
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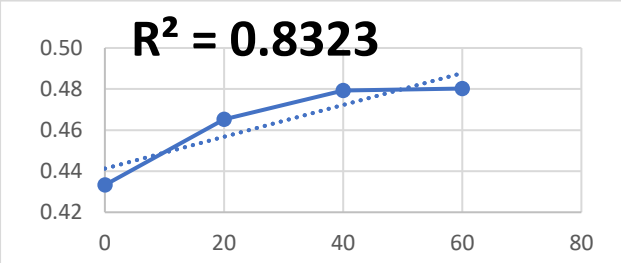
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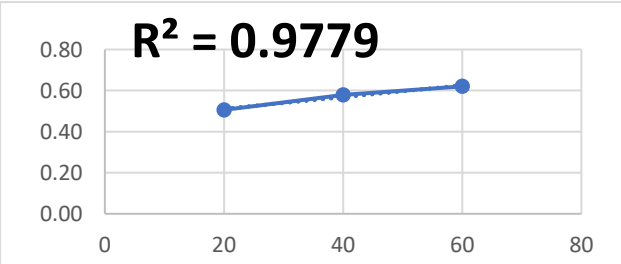
60
80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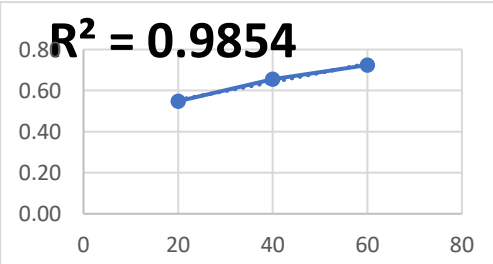
0.00
0
20
40
60
80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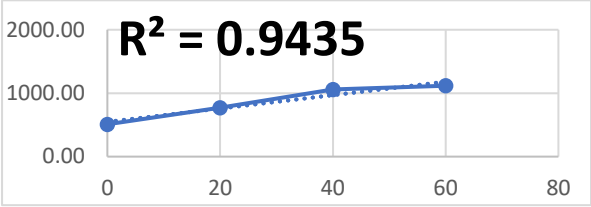
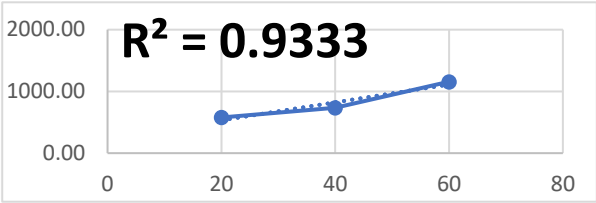
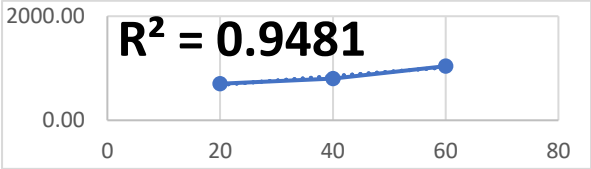
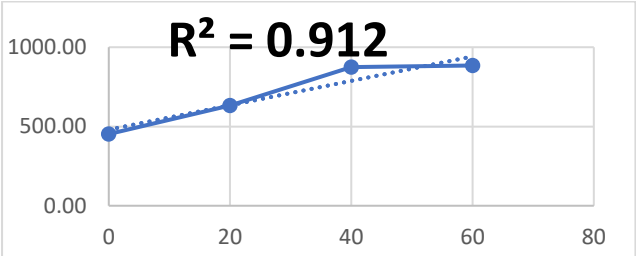
0.00
0
20
40
60
80

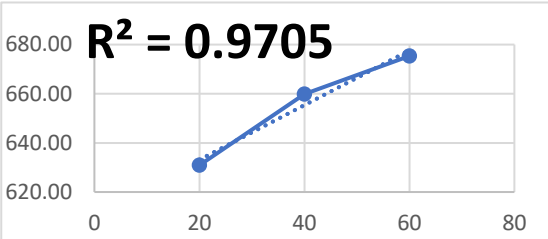
Freshwater tidal forest-CO2

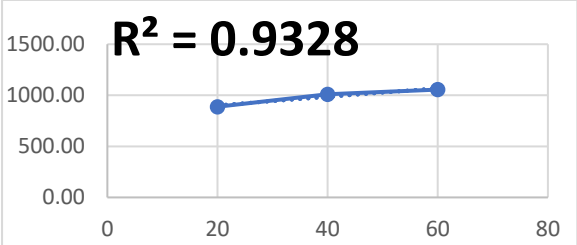


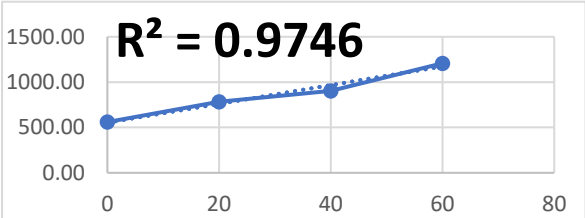


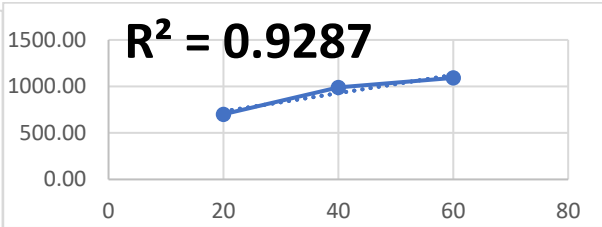


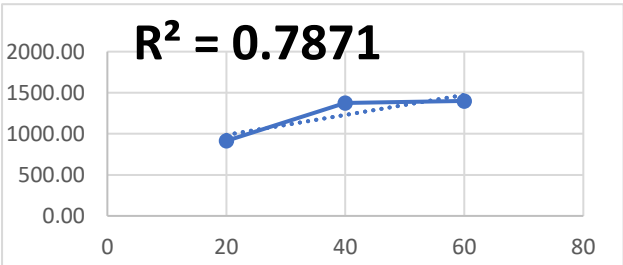




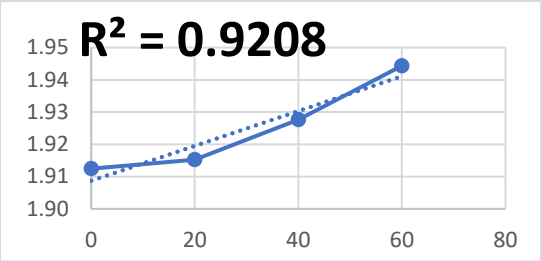


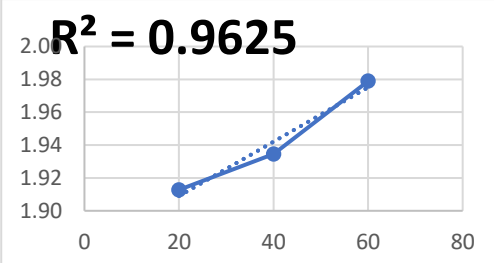


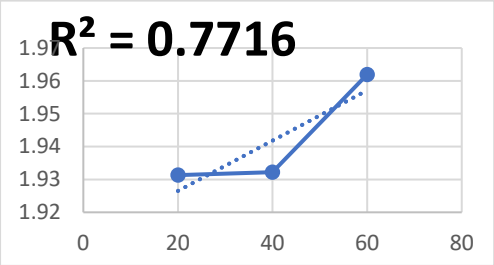


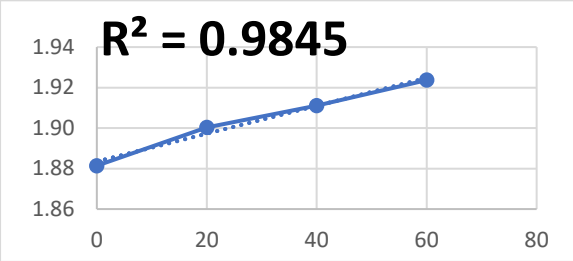


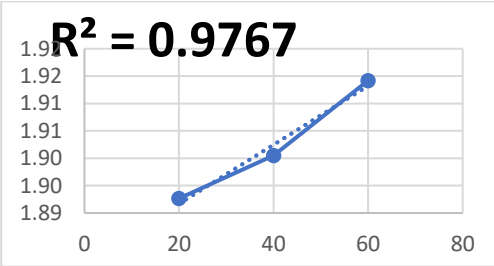
Freshwater tidal forest-CH4

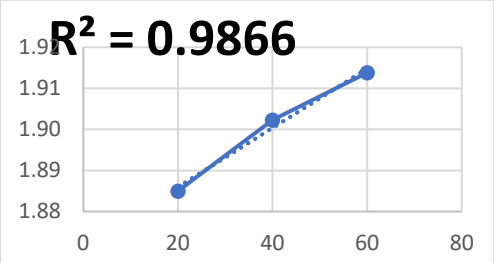


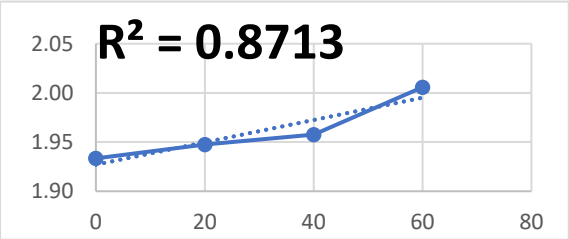


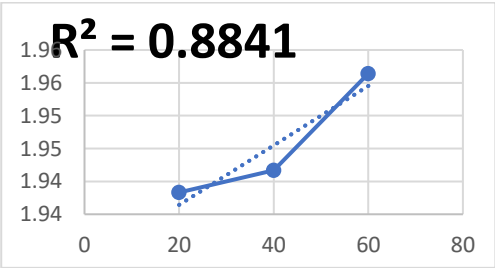




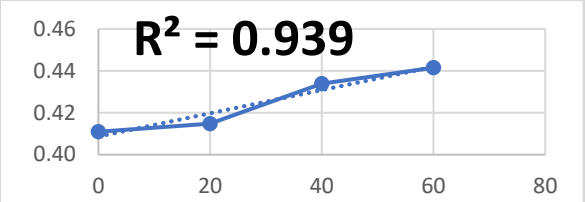


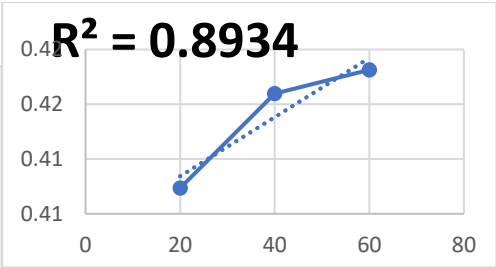


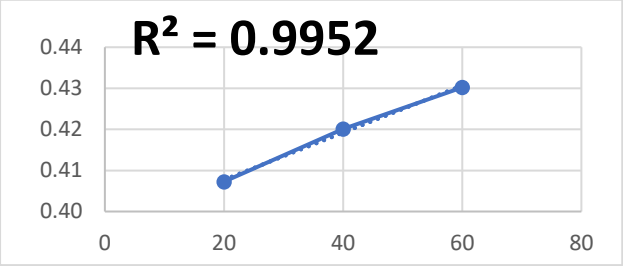


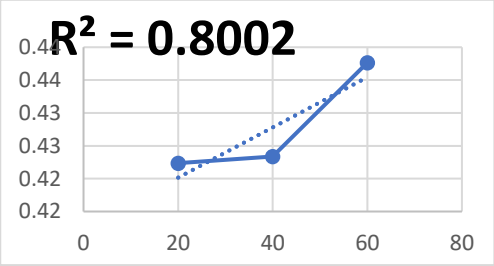


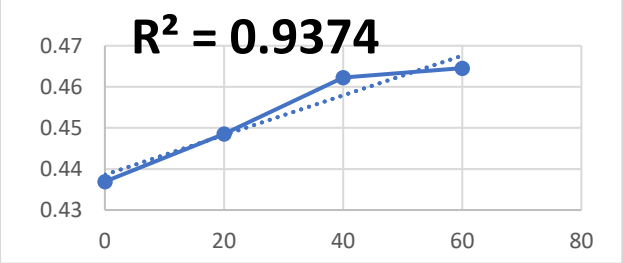
Freshwater tidal forest-N2O



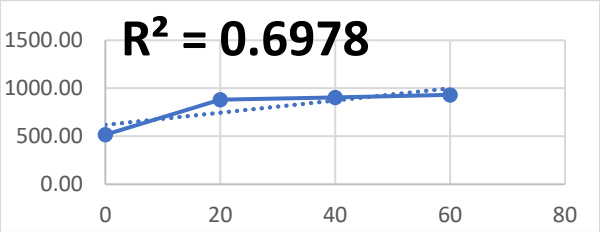


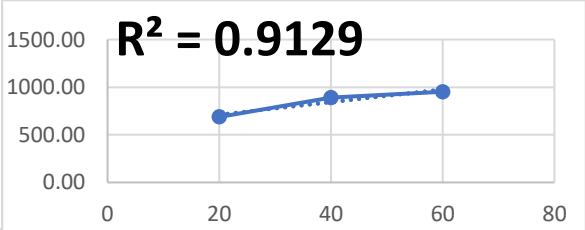


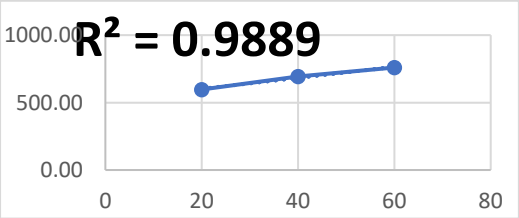


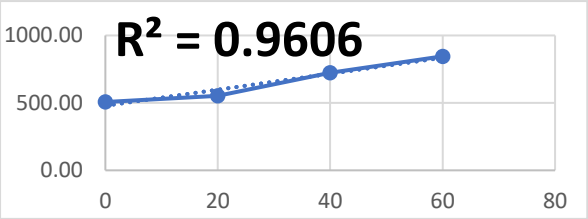


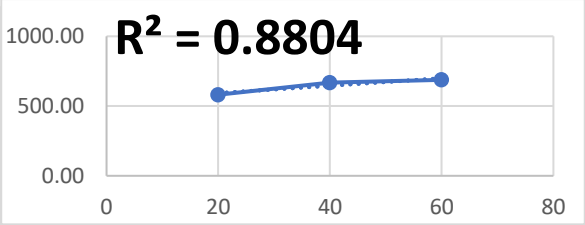
Sugarcane- CO2

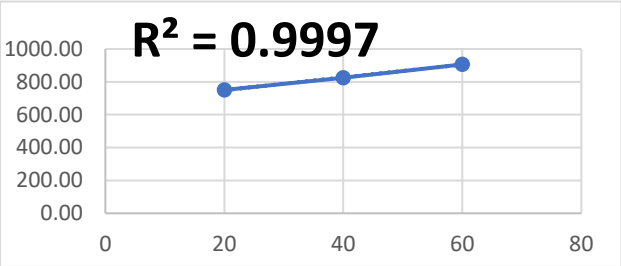


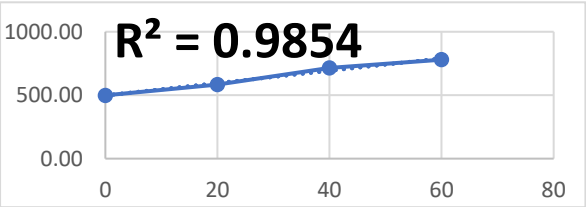


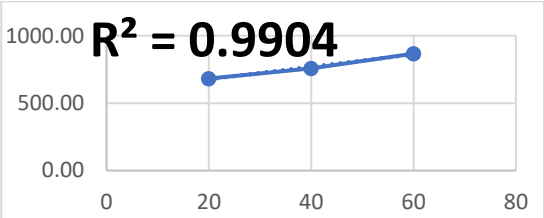


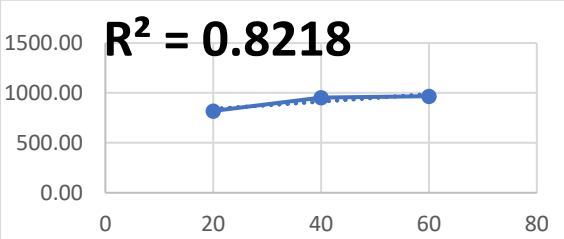




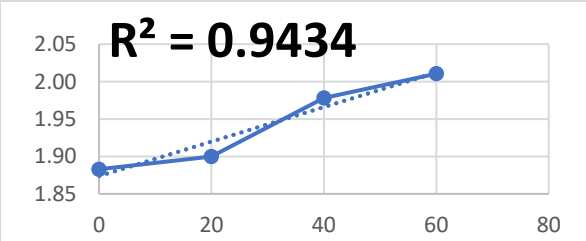


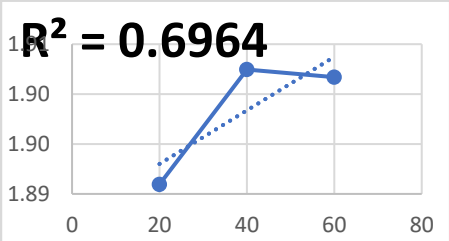


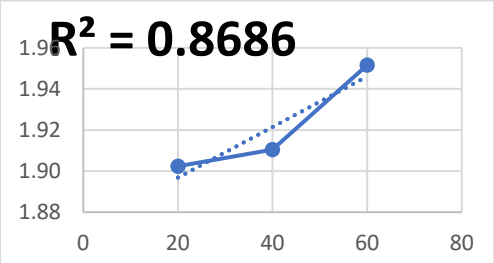


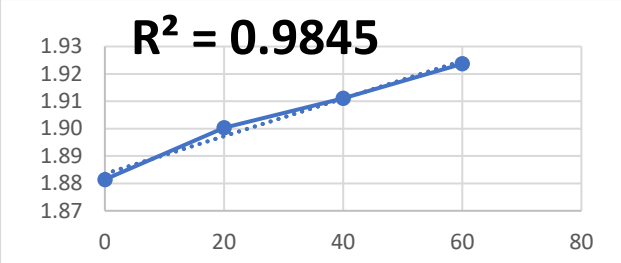


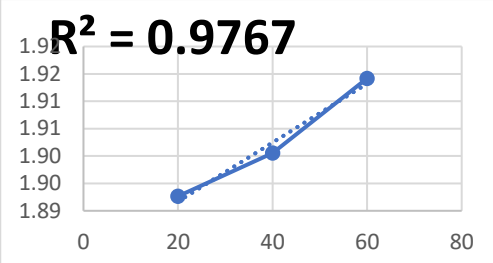
Sugarcane- CH4

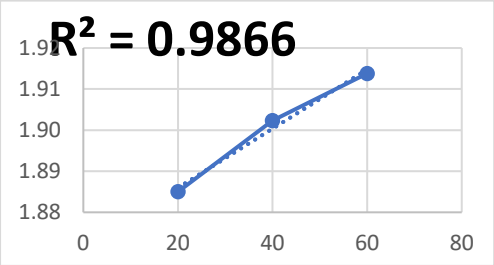


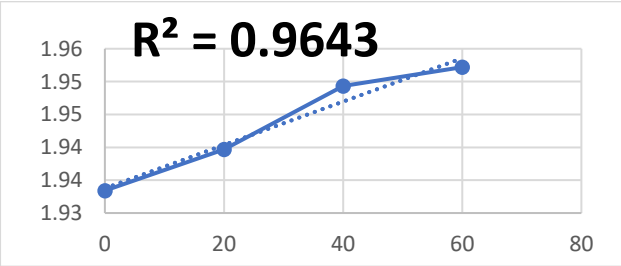


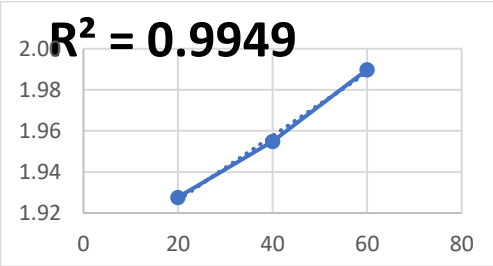


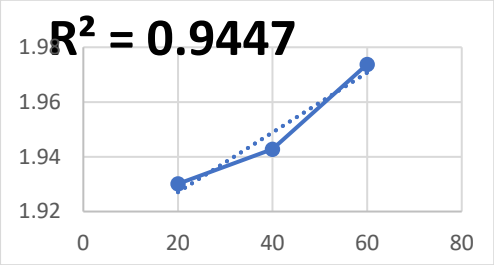




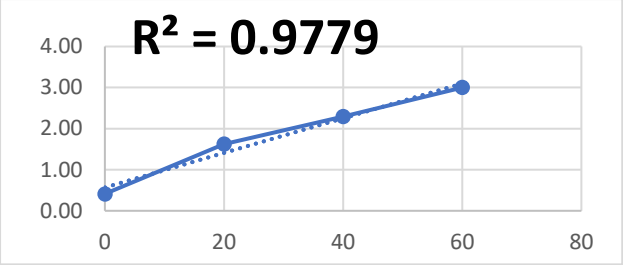


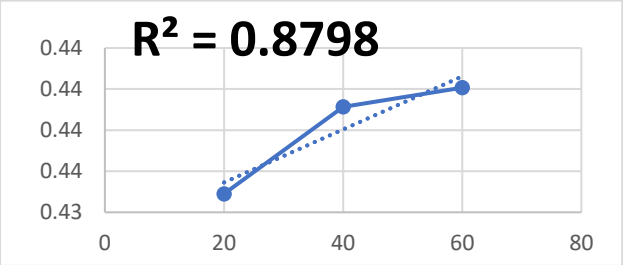


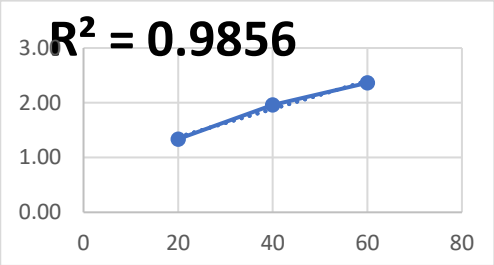


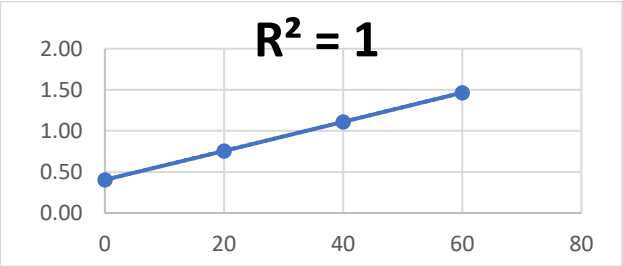


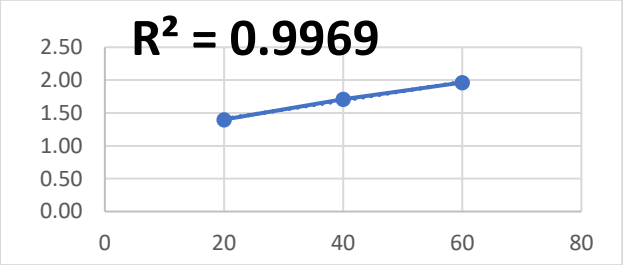
<u>Sugarcane- N2O</u>

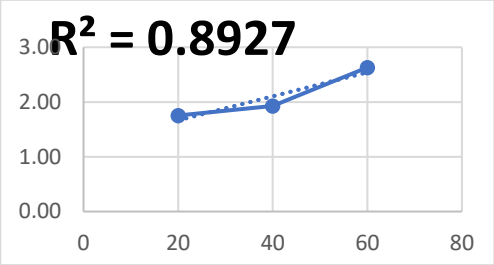


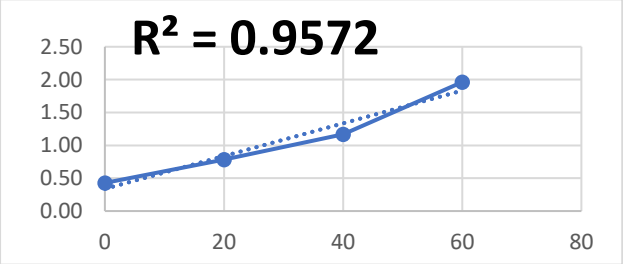


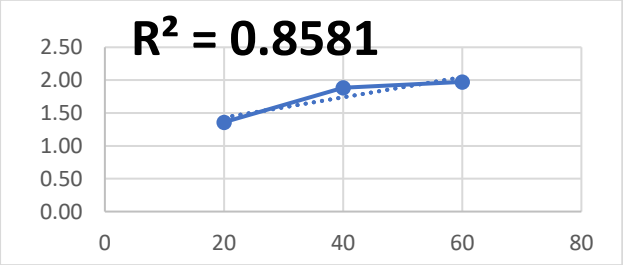


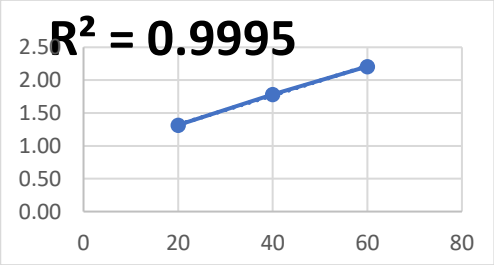




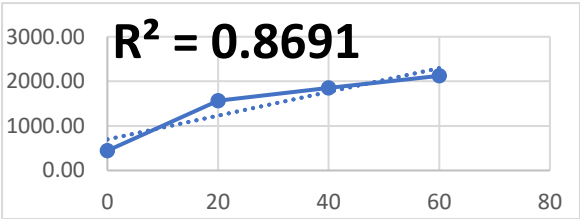








Wet ponded pasture-CO2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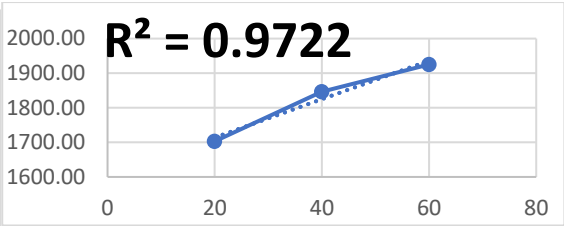
1000.00
0.00
0
20
40
60
80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1700.00
1600.00
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20
40
60
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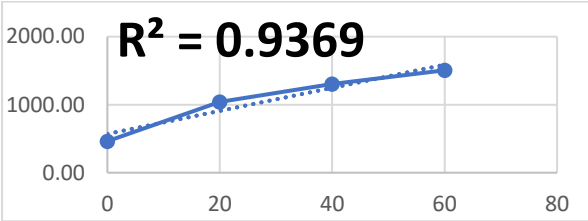
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0.00
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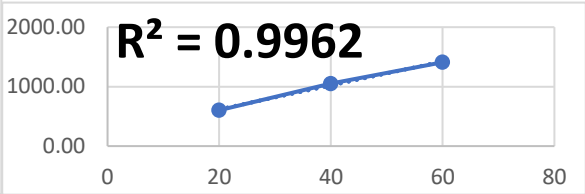
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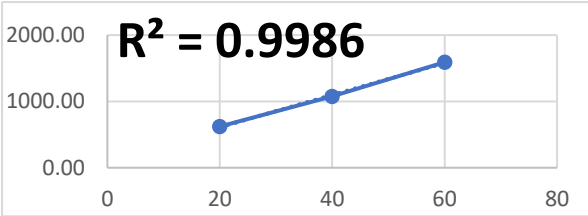
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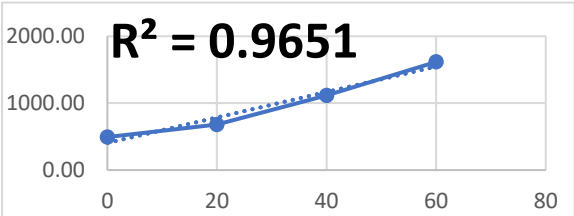
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1000.00
0.00
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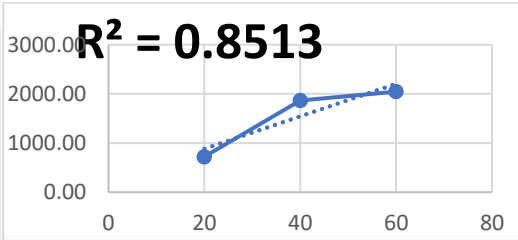
20
40
60
80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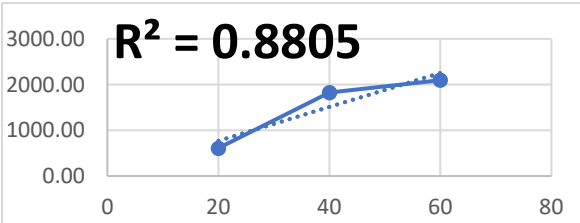
2000.00
1000.00
0.00
0
20
40
60
80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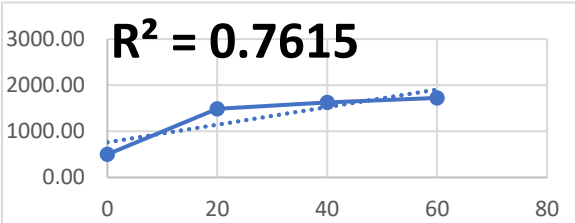
2000.00
1000.00
0.00
0
20
40
60
80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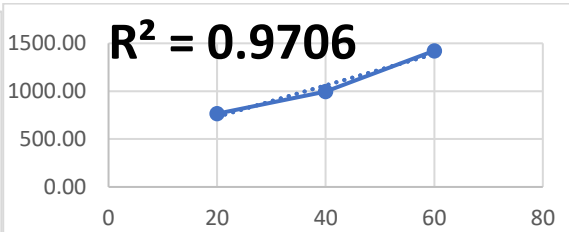
2000.00
1000.00
0.00
0
20
40
60
80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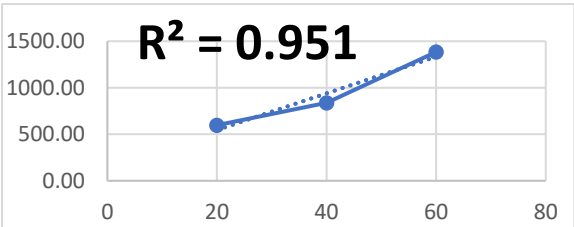
500.00
0.00
0
20
40
60
80


R² = 0.951
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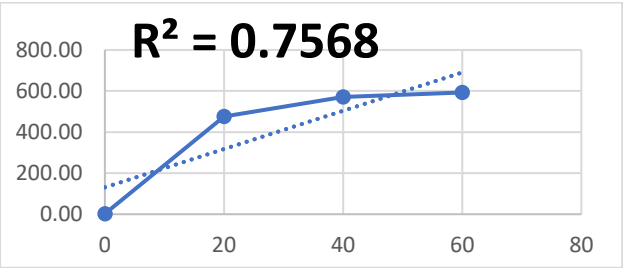
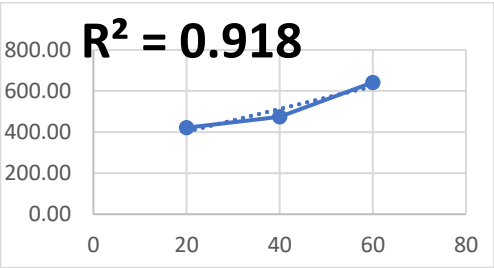
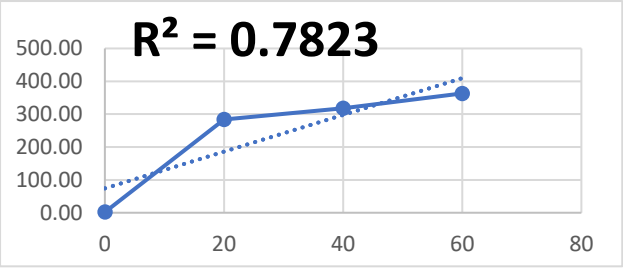
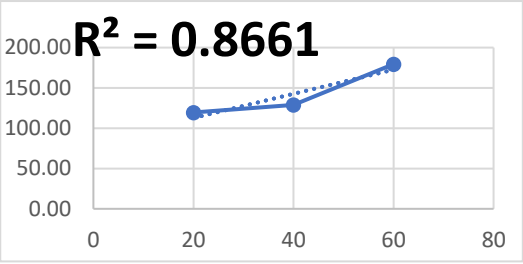
1000.00
500.00
0.00
0
20
40
60
80

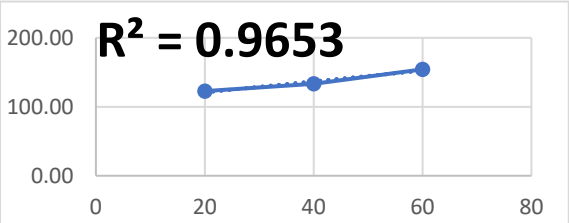
Wet pasture-CH4

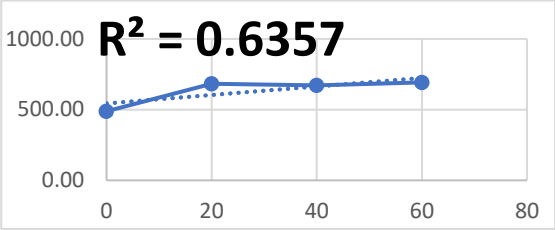


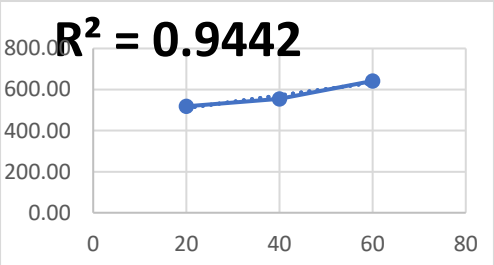


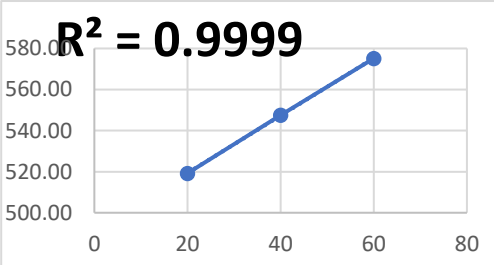


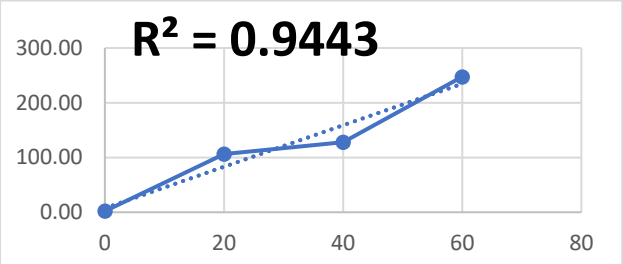


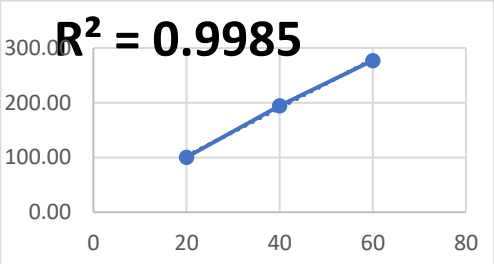


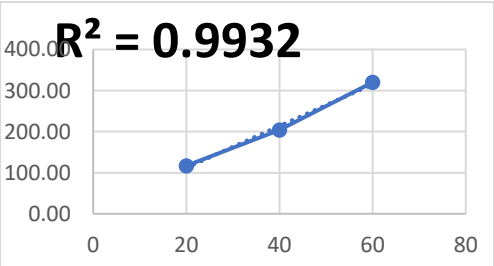




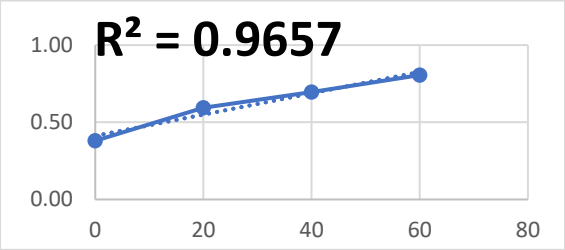


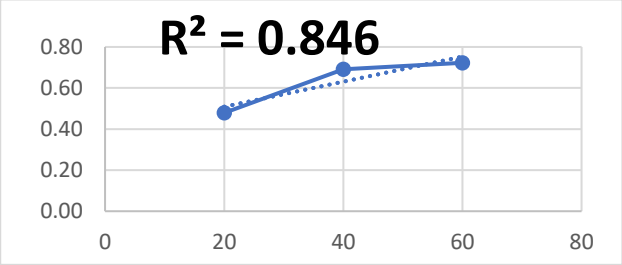


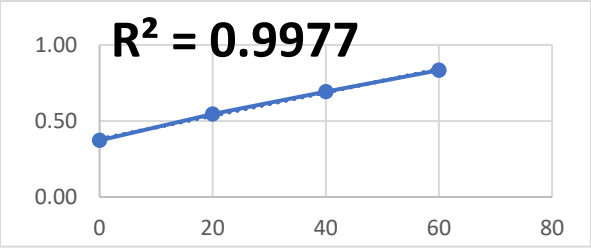


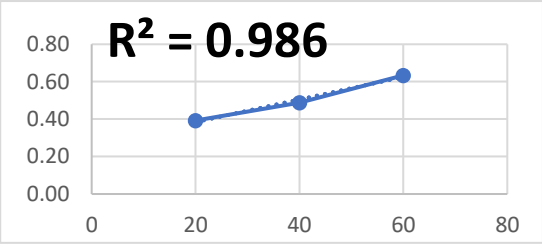


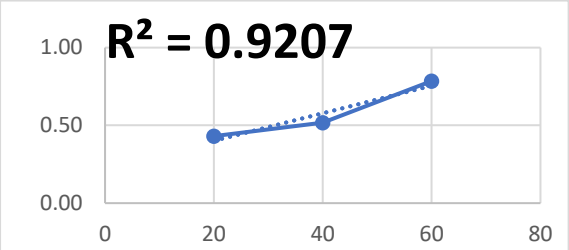
Wet ponded pasture-N2O

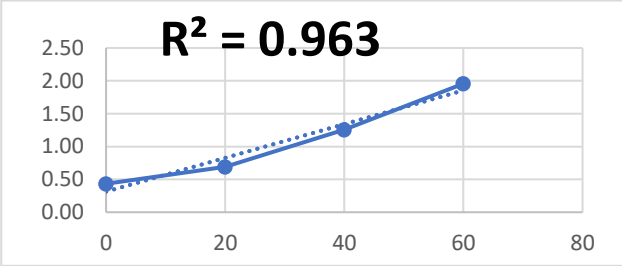


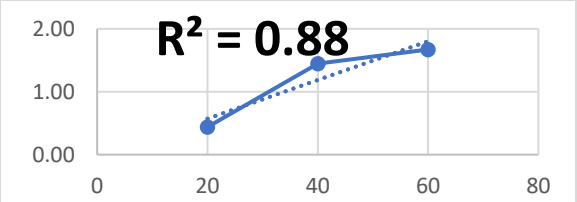


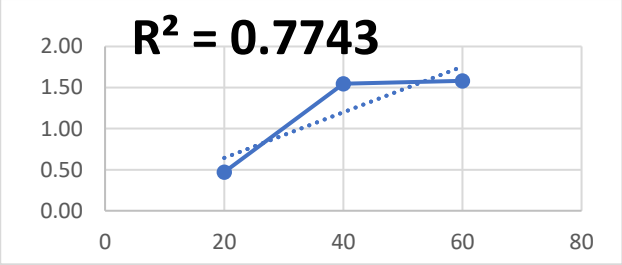


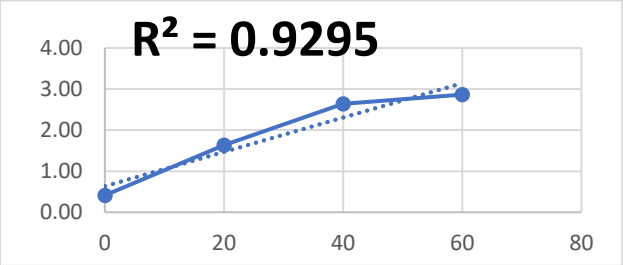


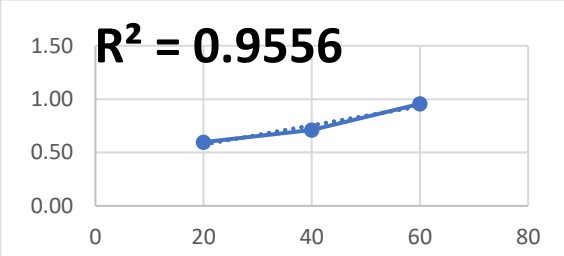


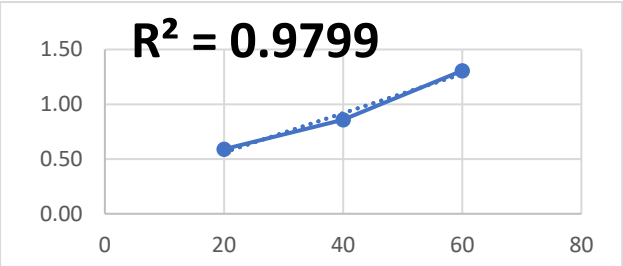




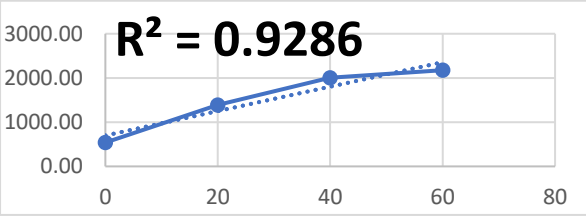


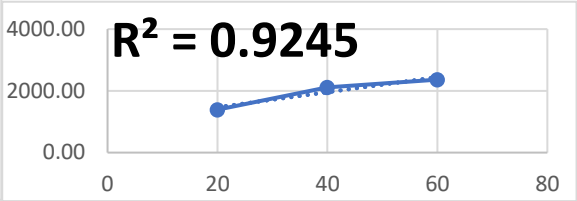


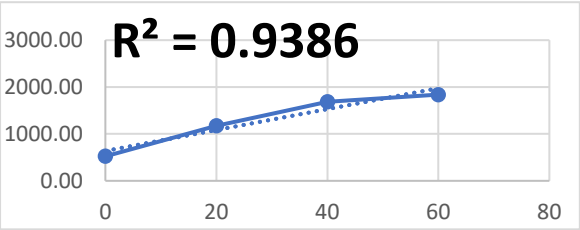


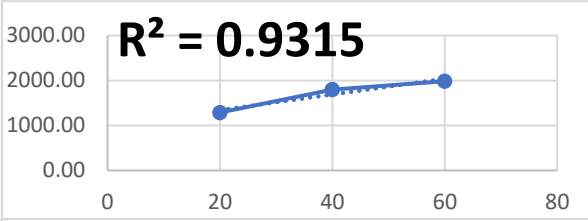


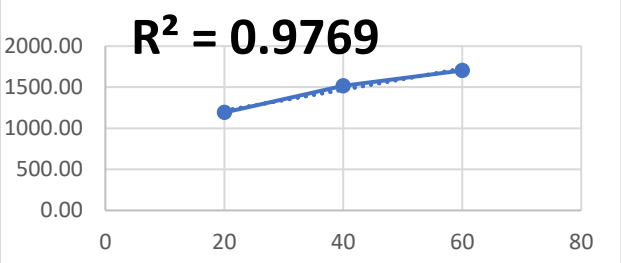
Dry ponded pasture-CO2

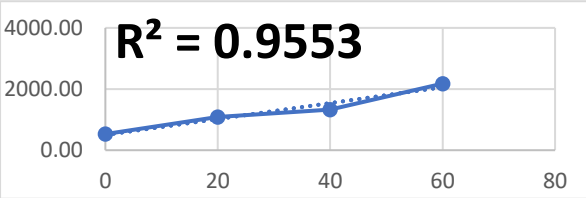


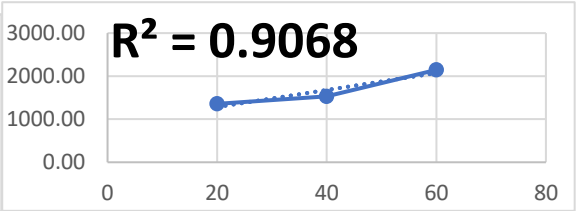


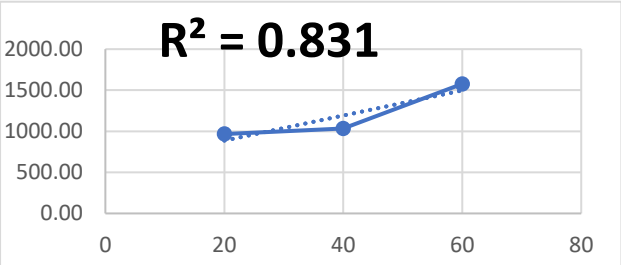


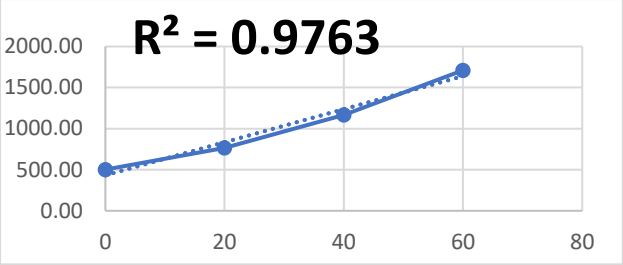


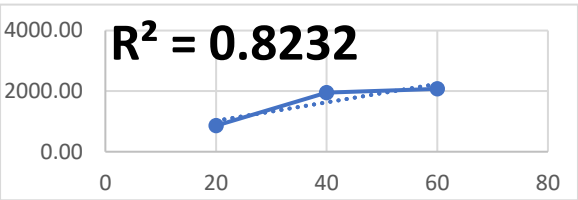


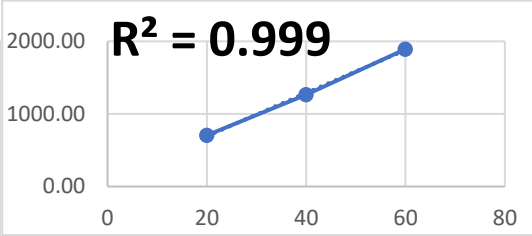




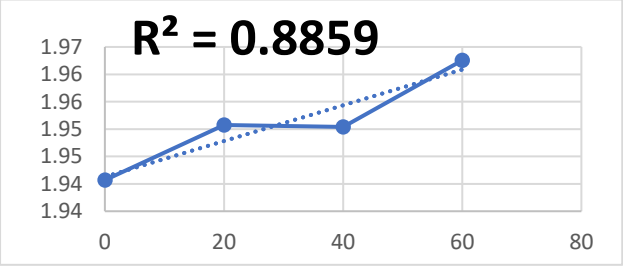


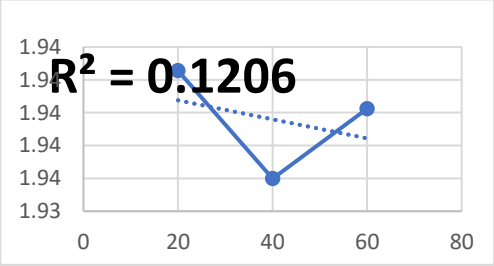


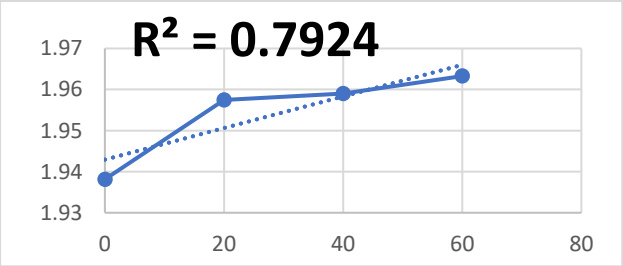


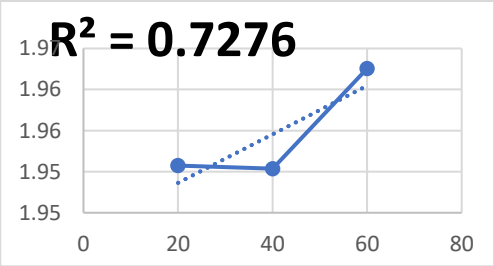


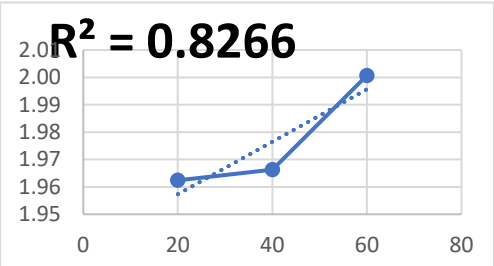
Dry ponded pasture-CH4

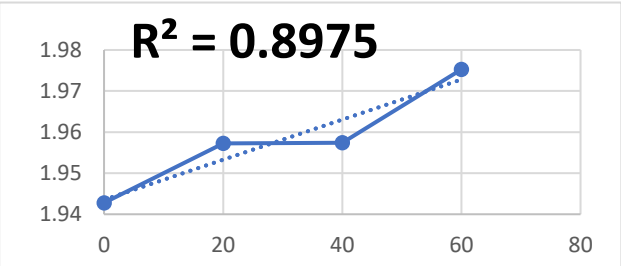


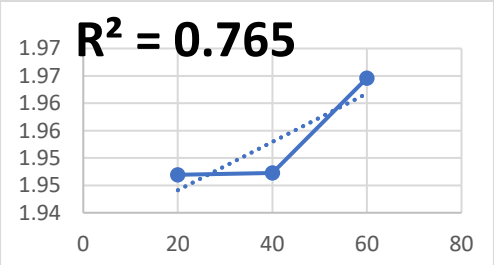


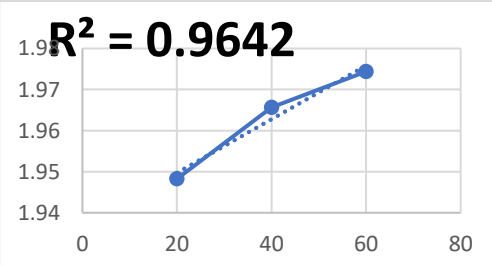


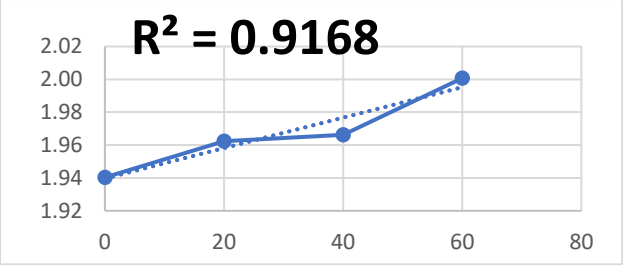


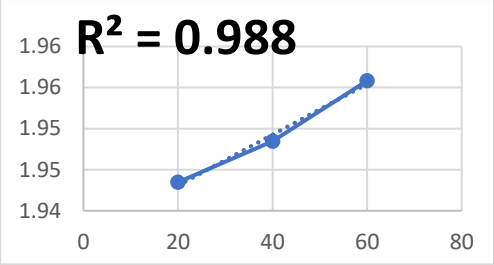


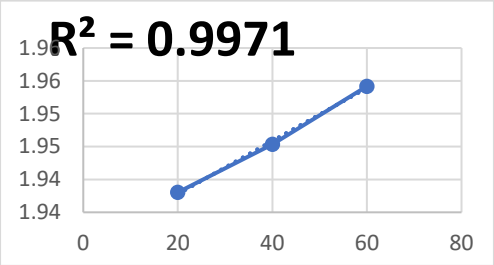




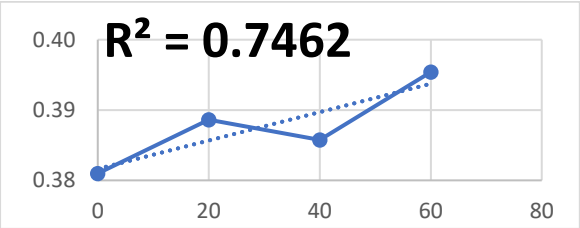


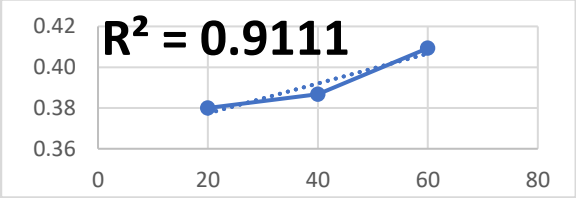


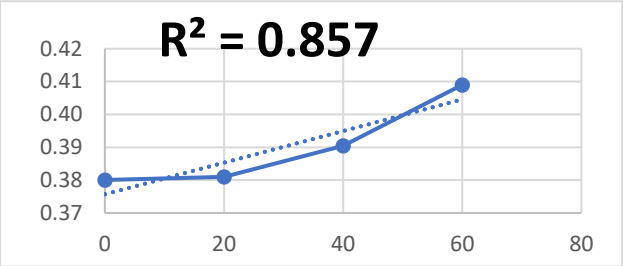


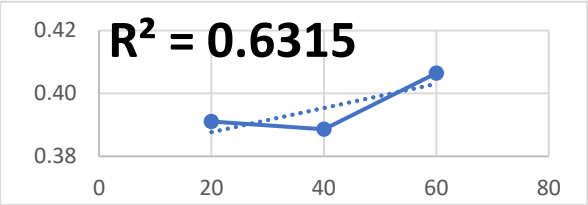


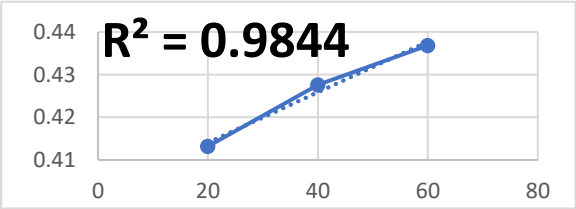
Dry ponded pasture-N2O

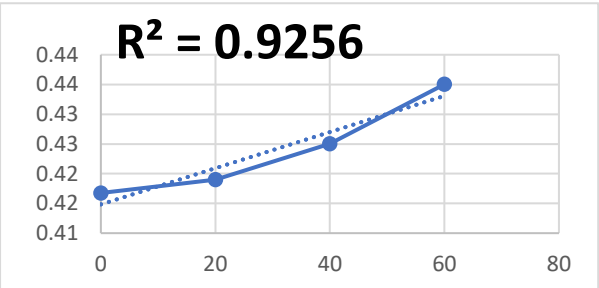


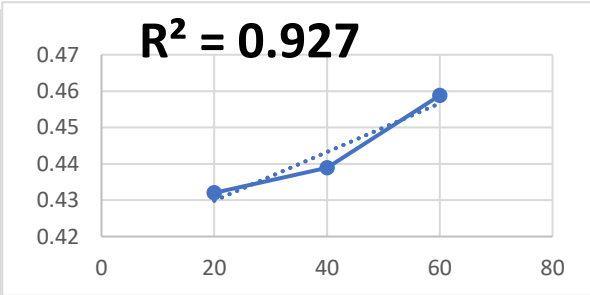


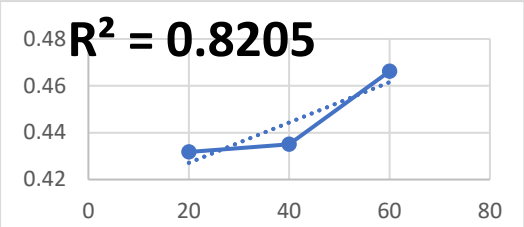


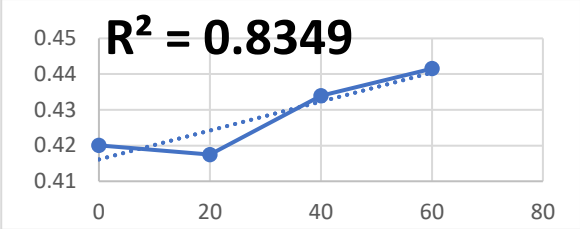


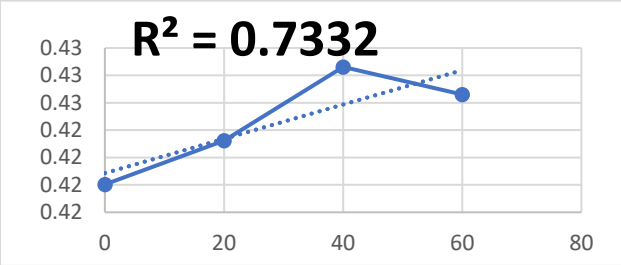


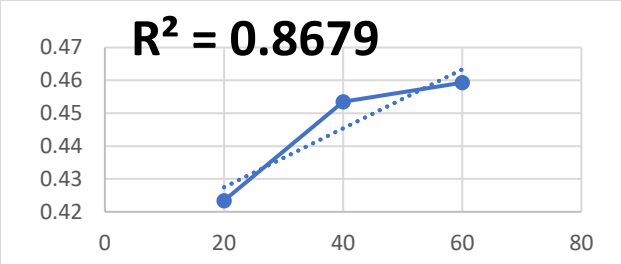






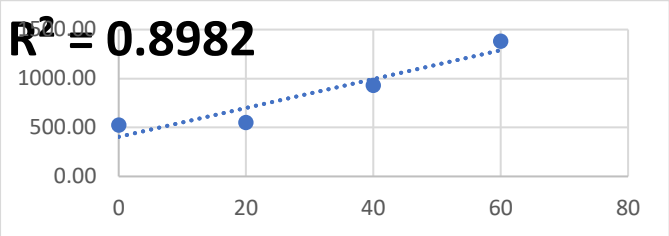


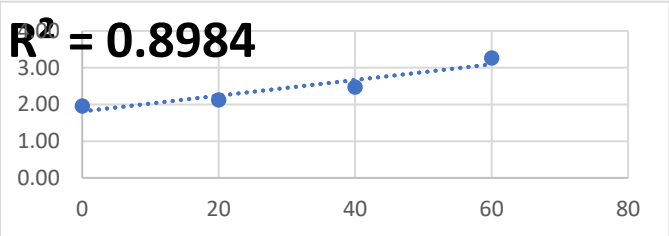


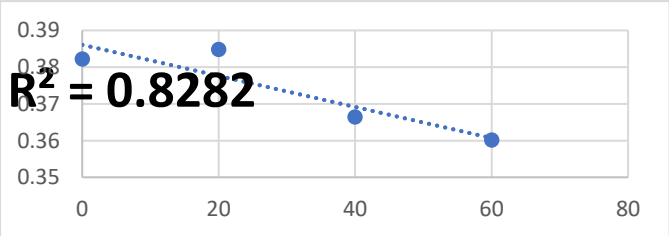


S2B- Linearity test results during wet-hot season

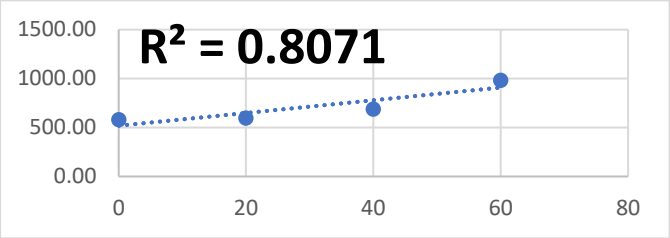
Mangroves- CO2

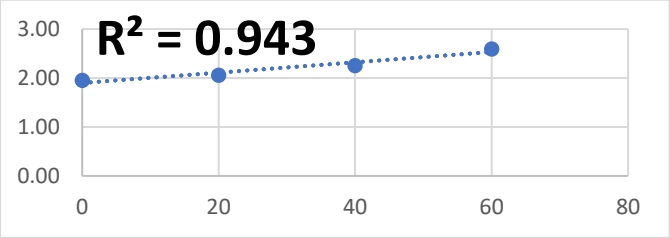


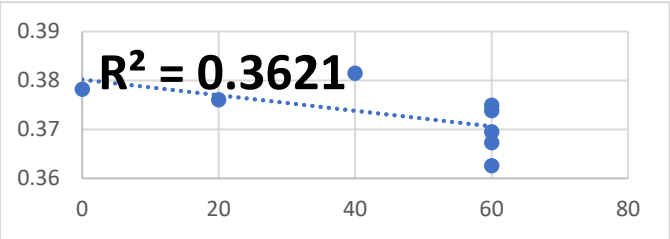




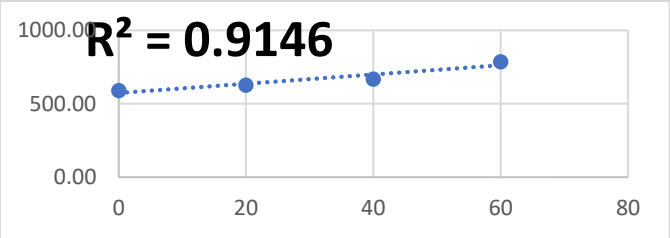
Mangroves-CH4

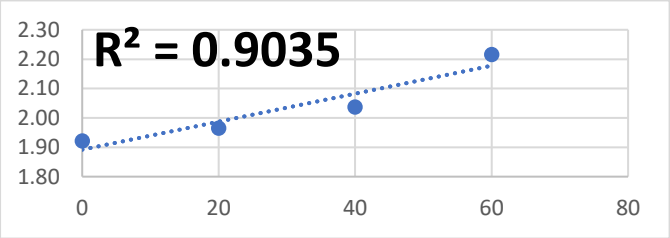


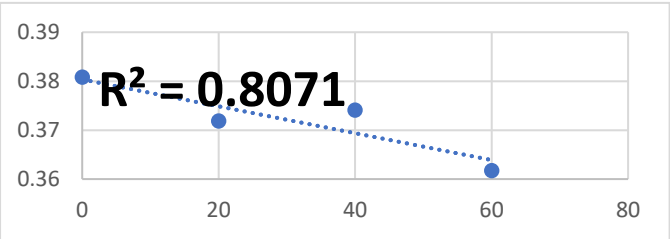




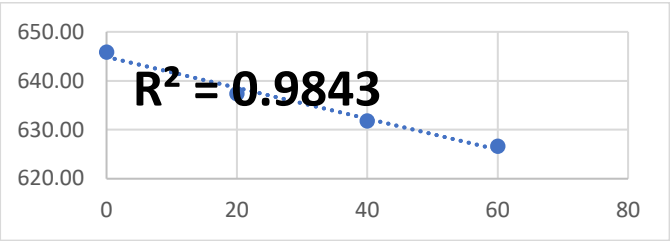
Mangroves N2O

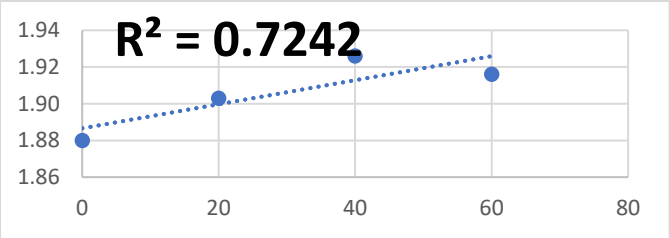


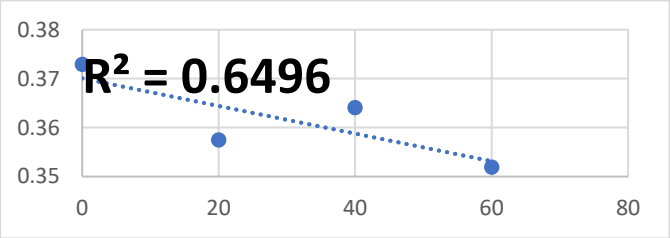




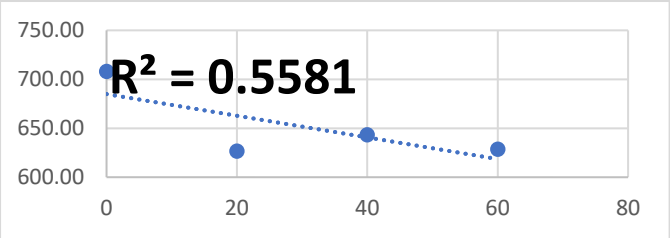
Saltmarsh CO2

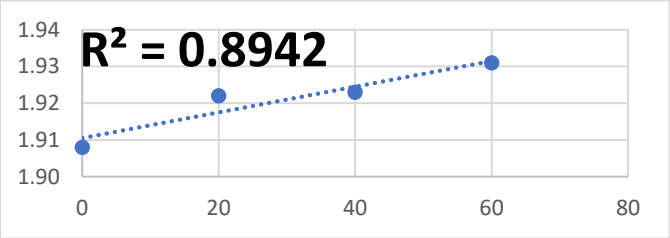


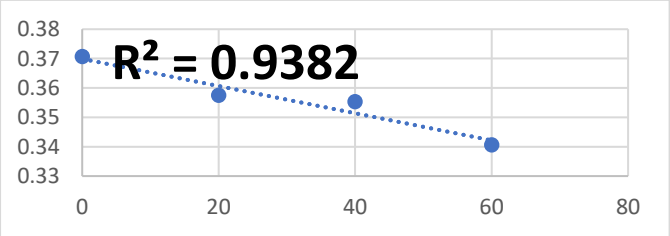




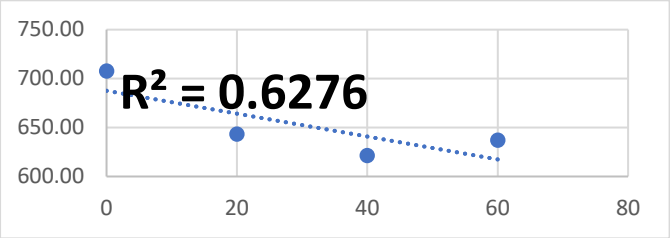
Saltmarsh-CH4

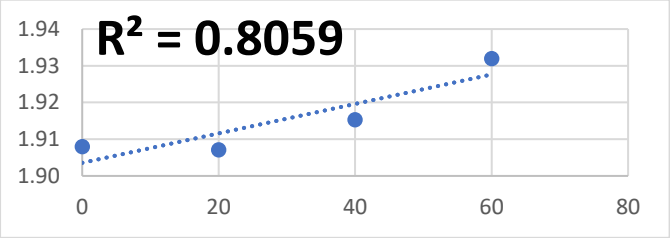


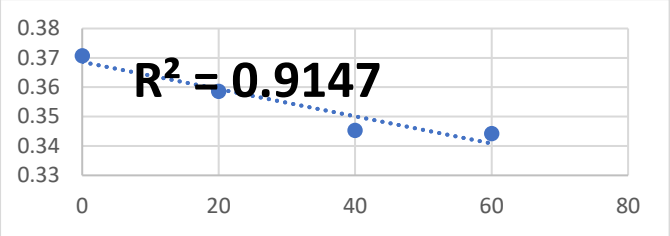




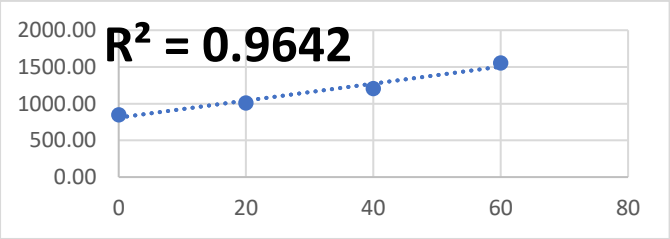
Saltmarsh-N2O

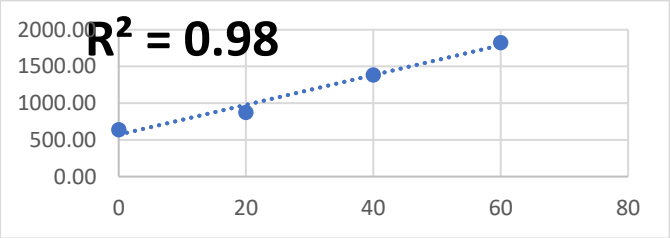


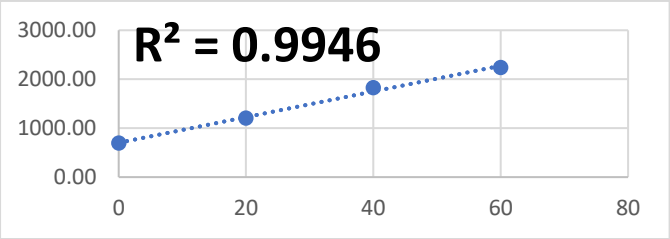




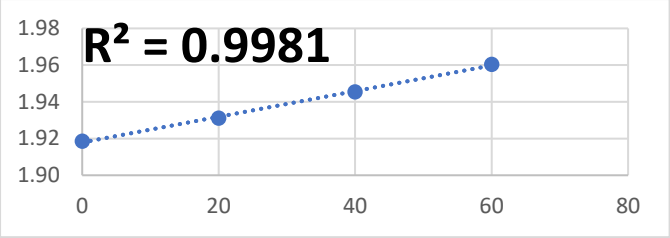
FW tidal forest-CO2

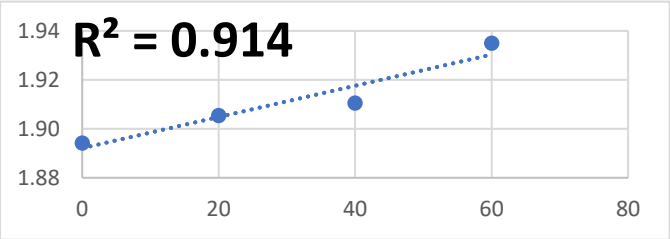


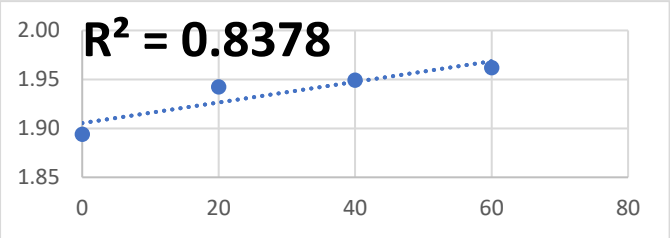




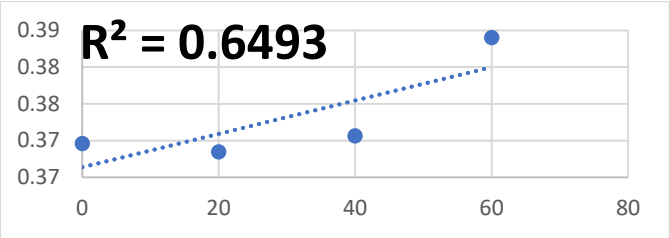
FW tidal forest-CH4

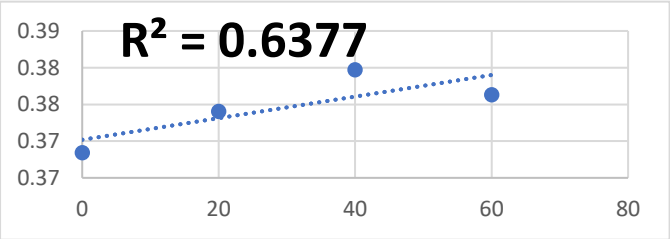


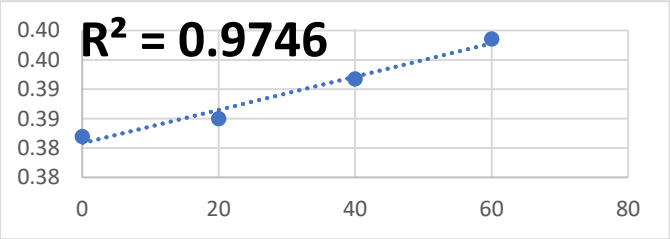




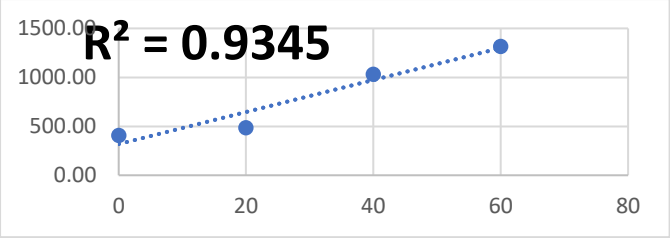
FW tidal forest-N2O

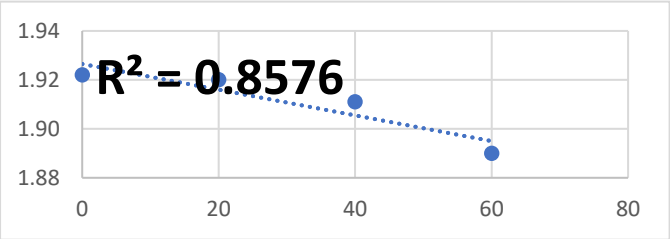


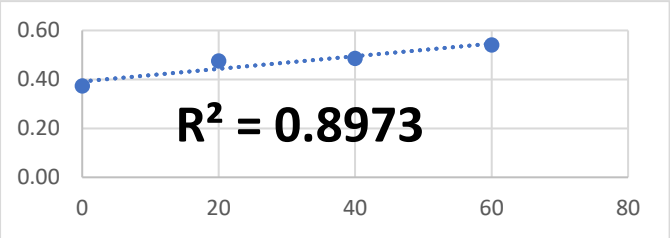




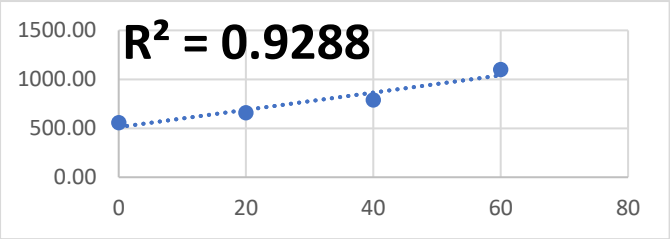
Sugarcane-CO2

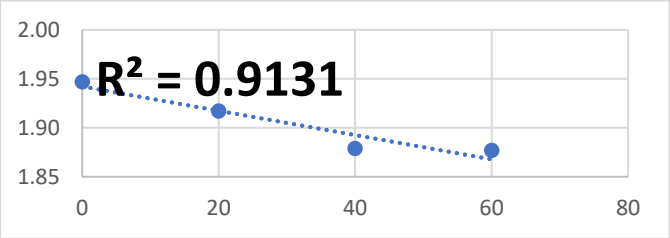


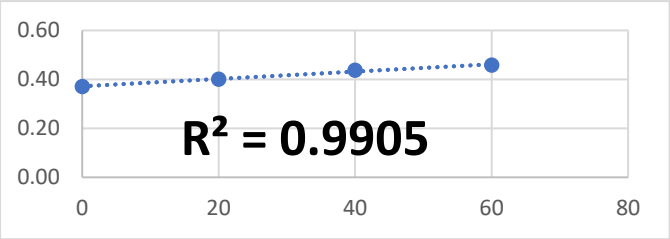




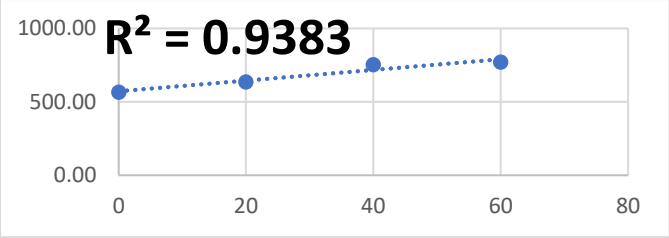
Sugarcane-CH4

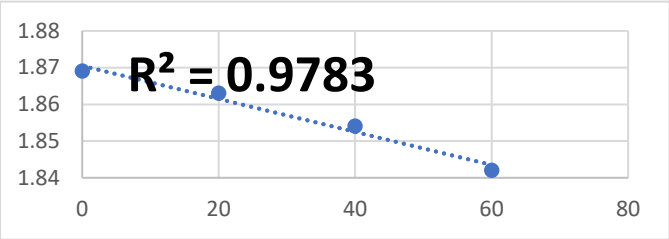


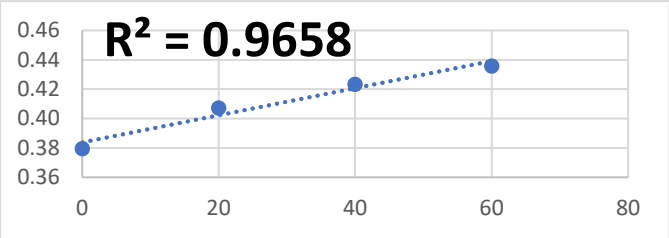




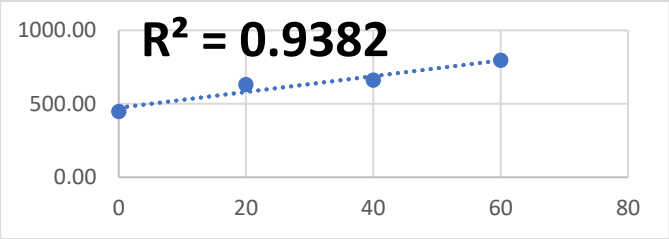
Sugarcane-N2O

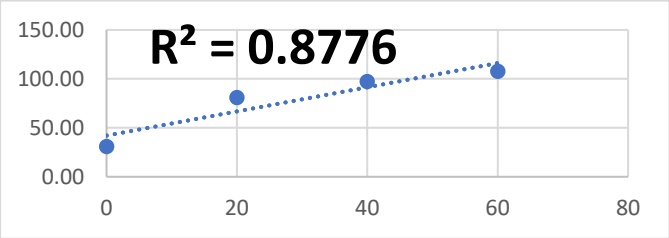


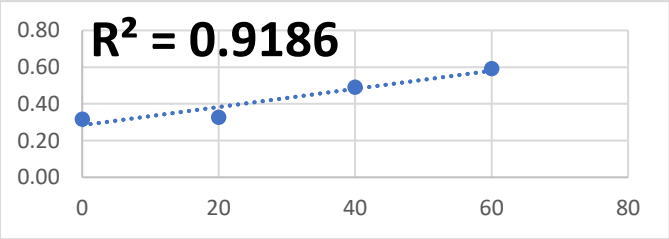




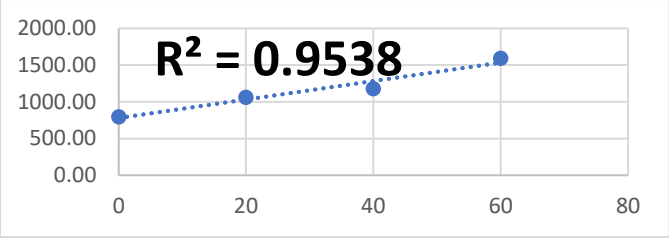
Wet Pasture-CO2

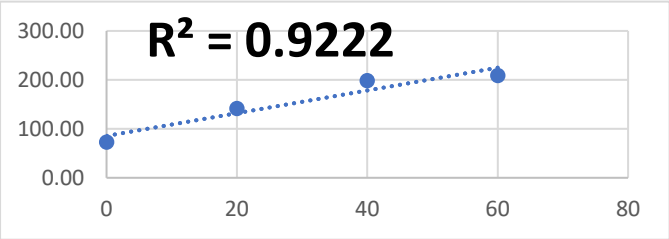


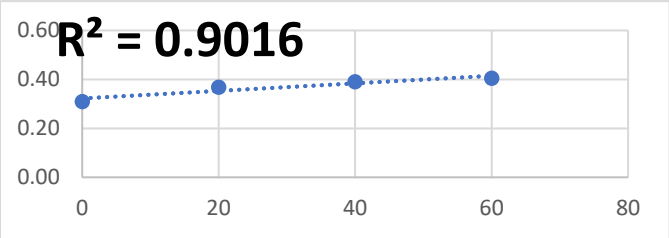




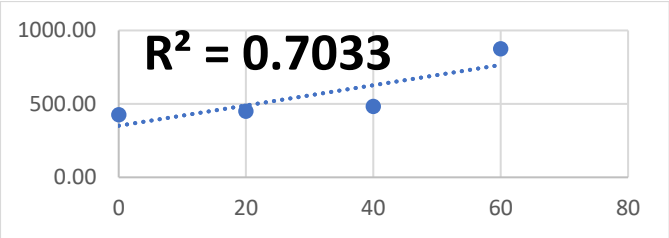
Wet pasture-CH4

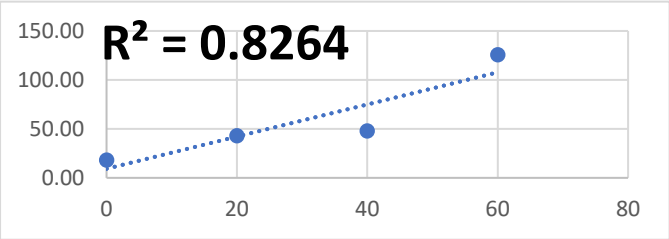


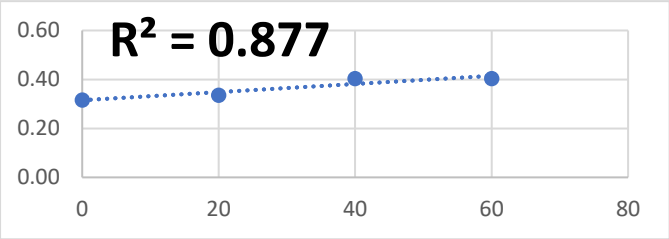




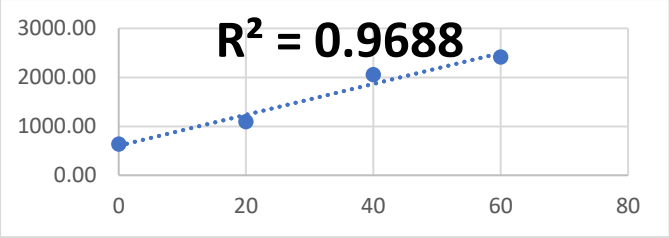
Wet pasture-N2O

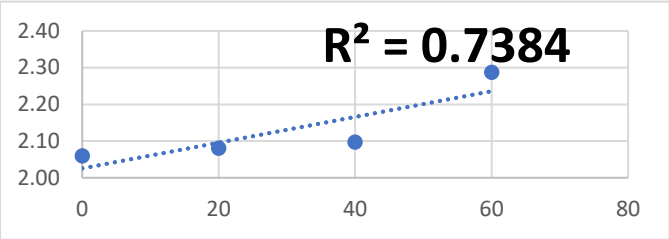


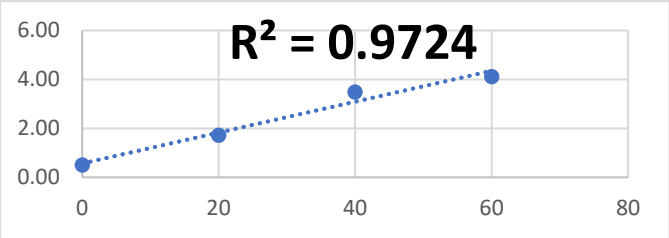




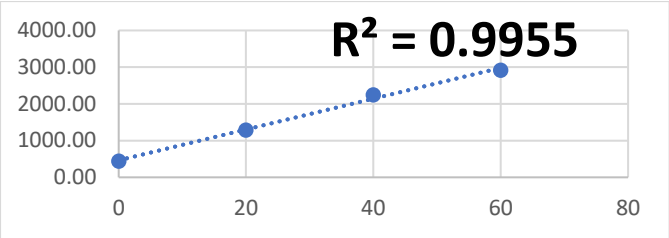
Dry Pasture-CO2

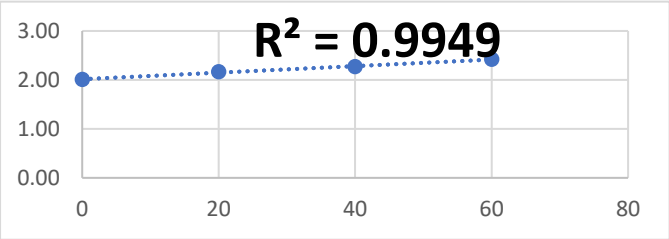


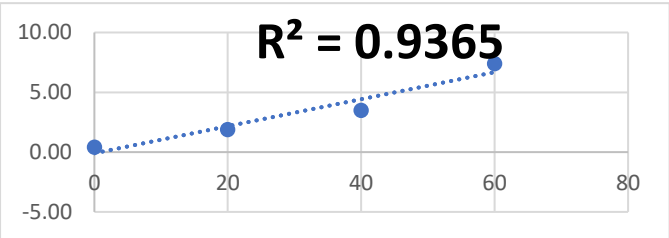




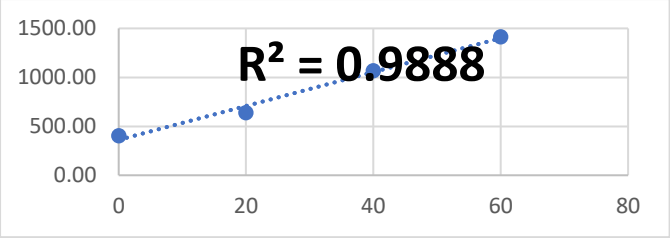
Dry pasture-CH4







Dry pasture-N2O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60
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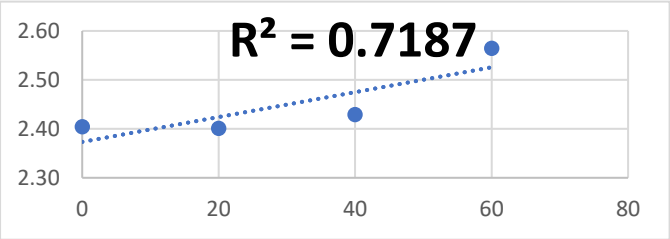
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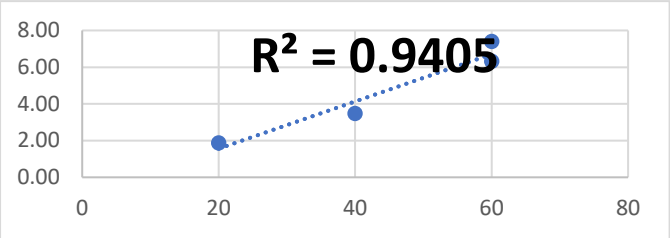
80
R² = 0.7187


8.00
6.00
4.00
2.00
0.00
0
20
40
60
80
R² = 0.9405

Section S3. Greenhouse gas flux from soils of tropical coastal wetlands: mangroves, saltmarsh, and freshwater (Fw) tidal forest during high and low tide during a dry-hot season

GHG	Land-use type	High tide Mean	SE	Low tide Mean	SE
CO_2 (g m^{-2} d^{-1})	Mangroves	2.55	0.37	3.25	0.57
	Saltmarsh	-1.12	0.24	0.69	0.40
	FW tidal forest	2.97	1.35	5.35	2.68
CH_4 (mg m^{-2} d^{-1})	Mangroves	3.38	0.98	236	73
	Saltmarsh	-0.13	0.06	-25	6
	Fw tidal forest	1.10	0.52	457	108
N_2O (mg m^{-2} d^{-1})	Mangroves	-0.74	0.17	0.15	0.06
	Saltmarsh	0.19	0.06	-0.14	0.04
	FW tidal forest	0.06	0.01	-0.25	0.16

Section S4. Monthly Climate Statistics for 'LUCINDA POINT' [032141]

Available at; http://www.bom.gov.au/jsp/ncc/cdio/cvg/av

Monthly Climate Statistics for 'LUCINDA POINT' [032141]						Source	http://www.bom.gov.au/jsp/ncc/cdio/cvg/av									
Created on [05 May 2021 14:44:52 GMT+00:00]																
032141 LUCINDA POINT																
Commenced: 1980																
Last Record: 2021																
Latitude: 18.52 Degrees South																
Longitude: 146.39 Degrees East																
Elevation: 10 m																
State: QLD																
Statistic E	January	February	March	April	May	June	July	August	Septembe	October	Novembe	Decembe	Annual	Number o	Start Year	End Year
Mean max	30.1	30.3	29.7	27.9	25.9	23.8	23.1	23.9	25.8	27	28.4	29.6	27.1	32	1980	2021
Highest te	37	38.5	35.9	33.1	31	29.9	28.4	29.5	32.5	31	34.4	37	38.5	32	1980	2021
Date of Hi	7-Jan-94	########	1-Mar-81	########	########	1-Jun-81	27-Jul-98	########	########	20-Oct-86	########	6-Dec-91	########	N/A	1980	2021
Lowest m	25.2	24.7	25.5	23.2	17.3	17.8	17.5	19.4	22.2	22.6	23.9	25.8	17.3	32	1980	2021
Date of Lo	13-Jan-81	########	4-Mar-98	########	########	21-Jun-07	15-Jul-16	########	1-Sep-86	21-Oct-10	########	########	########	N/A	1980	2021
Decile 1 m	28.5	28.2	27.9	26.2	24.2	21.8	21.4	22	23.9	25.4	26.9	28.1		30	1980	2021
Decile 9 m	32	32.3	31.8	29.9	28	25.9	25	26.1	28	28.7	29.9	31.4		30	1980	2021
Mean nun	14.3	14	10.6	2.2	0.1	0	0	0	0.2	0.2	2.5	10	54.1	32	1980	2021
Mean nun	0.1	0.4	0.1	0	0	0	0	0	0	0	0	0.1	0.7	32	1980	2021
Mean nun	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1980	2021
Mean min	25.3	25.2	24.8	23.4	21.3	19	18.1	18.9	20.9	22.9	24.2	25.3	22.4	32	1980	2021
Lowest te	19.7	18.7	21	16.7	13.9	11.7	11.2	12.5	13	17	20.4	20.3	11.2	32	1980	2021
Date of Lo	25-Jan-86	4-Feb-15	########	########	########	24-Jun-82	20-Jul-85	2-Aug-03	########	6-Oct-93	4-Nov-09	########	20-Jul-85	N/A	1980	2021
Highest m	29	29.2	28.8	27.3	26	23.6	23.1	23.6	25.4	26.4	28.5	29.1	29.2	32	1980	2021
Date of Hi	11-Jan-83	########	########	8-Apr-83	8-May-96	15-Jun-20	21-Jul-98	########	########	27-Oct-05	########	########	########	N/A	1980	2021
Decile 1 m	23.5	23.3	23	21.4	19	15.9	14.7	16.6	18.8	20.6	22.2	23.3		30	1980	2021
Decile 9 m	27.2	27	26.6	25.4	23.4	21.6	20.7	21	23	24.8	26	27.1		30	1980	2021
Mean nun	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1980	2021
Mean nun	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1980	2021
Mean dail																
Lowest gr																
Date of Lo														N/A		
Mean nun																
Mean rain	191.7	210	176	89.7	60.1	35.2	22.1	23.8	24.9	25.9	75.2	99.7	1076.1	29	1980	2020
Highest ra	880.8	542.8	684	312	195.6	194.4	166.8	139.4	151.4	223.6	607.4	568.8	2208.8	34	1980	2020
Date of Hi	1981	2009	2016	1990	1981	1990	1981	1997	2010	2010	2010	2018	2010	N/A	1980	2020
Lowest ra	0	32	35.6	8.6	1.4	2.8	0	0	0	0	0	0	504.9	34	1980	2020
Date of Lo	2002	2011	2008	1994	2001	2004	1995	2018	1991	2001	2019	2001	2002	N/A	1980	2020
Decile 1 m	21.5	44.2	42.3	22.5	12	8.2	4.2	0.7	0.5	1	3.6	16.2	593	34	1980	2020
Decile 5 (r	168.6	176.6	133.2	80.8	56.8	25.6	15.5	15.2	16.2	11.2	27.2	76.2	1047	34	1980	2020
Decile 9 m	314.1	412.9	315.6	148.6	97.2	64.2	40.5	50.7	53.8	59	216.4	151.8	1605.2	34	1980	2020
Highest da	173.6	213	175	134	94.4	167	134	81	65.4	106.2	132	390.4	390.4	32	1980	2020
Date of Hi	17-Jan-81	########	########	########	########	6-Jun-90	25-Jul-81	########	########	21-Oct-10	2-Nov-13	########	########	N/A	1980	2020
Mean nun	15.1	14.4	15.1	14	12	7.4	6.7	6.4	5.2	5.6	7.9	10.5	120.3	34	1980	2020
Mean nun	11.7	11.3	11.6	9.6	7.5	4.7	3.4	3.1	2.7	3.4	5	7	81	32	1980	2020
Mean nun	5.3	5.2	4.4	2.5	1.7	0.8	0.4	0.6	0.8	0.6	2	2.3	26.6	32	1980	2020
Mean nun	2.5	2.5	2.2	0.8	0.4	0.2	0.1	0.2	0.2	0.2	0.9	1	11.2	32	1980	2020
Mean dail	425	463	426	424	397	406	394	358	362	427	425	413	410	13	2003	2021
Maximum	115	185	109	96	82	68	94	72	76	113	74	84	185	22	1980	2021
Date of M	13-Jan-09	2-Feb-11	########	########		11-Jun-15	20-Jul-05			24-Oct-05			2-Feb-11	N/A	1980	2021
Mean dail																
Mean dail	19.4	18.9	17.5	15.8	14.1	13.3	14.4	17.6	20	22	22.8	22.8	18.2	14	2007	2021
Mean nun																
Mean nun																
Mean dail																
Mean 9am	27.5	27.6	26.8	25	22.9	20.7	19.6	20.5	22.9	25.1	26.6	27.6	24.4	20	1980	2010
Mean 9am														7	2000	2010
Mean 9am														7	2000	2010
Mean 9am														7	2000	2010
Mean 9am																
Mean 9am	16	17	19.4	21.4	21.3	21.3	20.3	18.6	16.7	16.2	15.3	14.8	18.2	18	1980	2010
Mean 3pm	28.7	28.9	28.5	26.8	24.9	22.8	22.4	22.7	24.4	25.8	27	28.2	25.9	20	1980	2010
Mean 3pm														7	2000	2010
Mean 3pm														7	2000	2010
Mean 3pm														7	2000	2010
Mean 3pm																
Mean 3pm	21.6	20.7	20.7	20.3	17.9	17.7	17.2	18.9	20.9	23.6	23	22.9	20.4	18	1980	2010

Section S5. Analysis of physiochemical parameters across seasonal cycle

Nonparametric Tests

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of Gravimetric water content% is the same across categories of Season .	Independent-Samples Kruskal-Wallis Test	.033	Reject the null hypothesis.
2	The distribution of BD (g cm-3) is the same across categories of Season .	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.
3	The distribution of Soil Tem is the same across categories of Season .	Independent-Samples Kruskal-Wallis Test	.000	Reject the null hypothesis.

a. The significance level is .050.

b. Asymptotic significance is displayed.

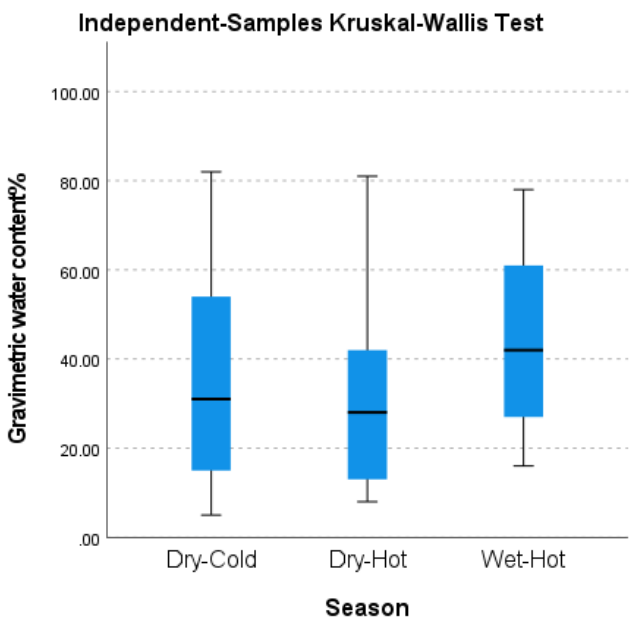
Independent-Samples Kruskal-Wallis Test

Gravimetric water content% across Season

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	6.800[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.033

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Season

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Dry-Hot-Dry-Cool	.317	6.743	.047	.963	1.000
Dry-Hot-Wet-Hot	-15.383	6.743	-2.281	.023	.068
Dry-Cool-Wet-Hot	-15.067	6.743	-2.234	.025	.076

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

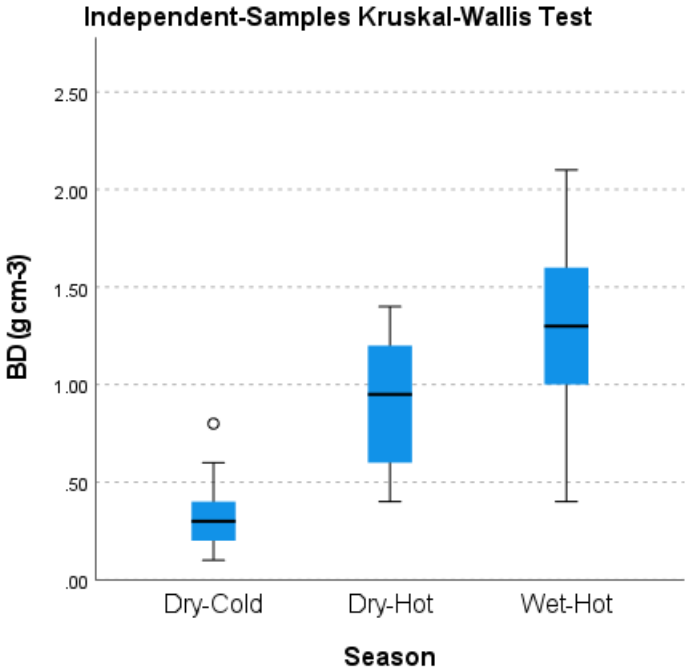
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

BD (g cm-3) across Season

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	54.599[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Season

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Dry-Cool-Dry-Hot	-33.683	6.729	-5.006	.000	.000
Dry-Cool-Wet-Hot	-48.517	6.729	-7.210	.000	.000
Dry-Hot-Wet-Hot	-14.833	6.729	-2.204	.028	.083

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

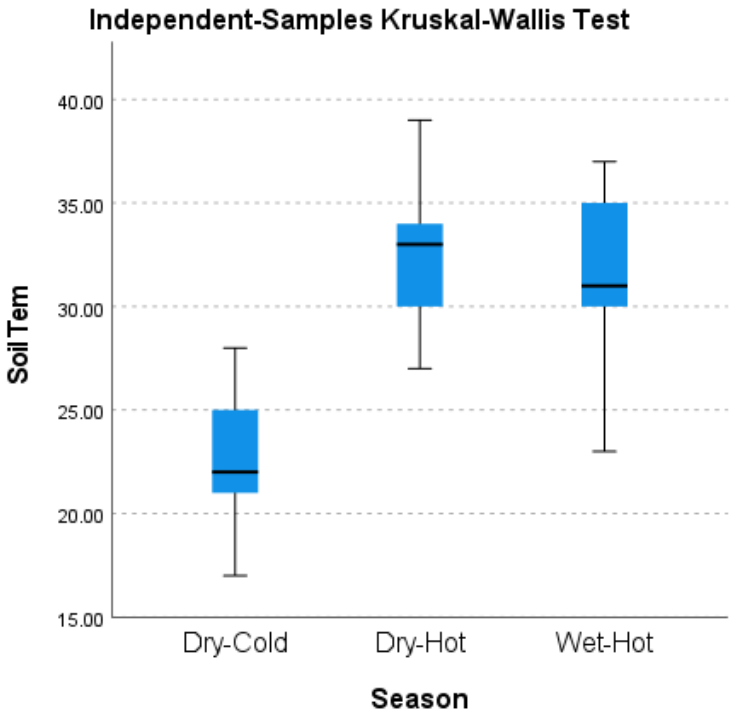
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Soil Tem across Season

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	57.561[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Season

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Dry-Cool-Wet-Hot	-42.583	6.724	-6.333	.000	.000
Dry-Cool-Dry-Hot	-45.617	6.724	-6.784	.000	.000
Wet-Hot-Dry-Hot	3.033	6.724	.451	.652	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Analysis of soil physiochemical parameters across sites and depths (Independent-Samples Kruskal-Wallis Test)

Gravimetric water content% across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	28.346[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.

Pairwise Comparisons of Land use

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Sugarcane-Dry Pastu	5.000	5.556	.900	.368	1.000
Sugarcane-Saltmarsh	10.000	5.556	1.800	.072	1.000
Sugarcane-FW tidal	15.000	5.556	2.700	.007	.104
Sugarcane-Mangroves	20.000	5.556	3.600	.000	.005
Sugarcane-Wet Pastu	-25.000	5.556	-4.500	.000	.000
Dry Pastu-Saltmarsh	-5.000	5.556	-.900	.368	1.000
Dry Pastu-FW tidal	-10.000	5.556	-1.800	.072	1.000
Dry Pastu-Mangroves	-15.000	5.556	-2.700	.007	.104
Dry Pastu-Wet Pastu	-20.000	5.556	-3.600	.000	.005
Saltmarsh-FW tidal	5.000	5.556	.900	.368	1.000
Saltmarsh-Mangroves	10.000	5.556	1.800	.072	1.000
Saltmarsh-Wet Pastu	-15.000	5.556	-2.700	.007	.104
FW tidal-Mangroves	-5.000	5.556	-.900	.368	1.000
FW tidal-Wet Pastu	-10.000	5.556	-1.800	.072	1.000
Mangroves-Wet Pastu	-5.000	5.556	-.900	.368	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

pH across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	23.802[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.

Pairwise Comparisons of Land use

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Dry Pastu-FW tidal	-3.100	5.522	-.561	.575	1.000
Dry Pastu-Wet Pastu	-6.500	5.522	-1.177	.239	1.000
Dry Pastu-Sugarcane	-16.800	5.522	-3.043	.002	.035
Dry Pastu-Saltmarsh	-18.100	5.522	-3.278	.001	.016
Dry Pastu-Mangroves	-19.700	5.522	-3.568	.000	.005
FW tidal-Wet Pastu	-3.400	5.522	-.616	.538	1.000
FW tidal-Sugarcane	-13.700	5.522	-2.481	.013	.196
FW tidal-Saltmarsh	-15.000	5.522	-2.717	.007	.099
FW tidal-Mangroves	-16.600	5.522	-3.006	.003	.040
Wet Pastu-Sugarcane	10.300	5.522	1.865	.062	.932
Wet Pastu-Saltmarsh	11.600	5.522	2.101	.036	.535
Wet Pastu-Mangroves	13.200	5.522	2.391	.017	.252
Sugarcane-Saltmarsh	1.300	5.522	.235	.814	1.000
Sugarcane-Mangroves	2.900	5.522	.525	.599	1.000
Saltmarsh-Mangroves	1.600	5.522	.290	.772	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

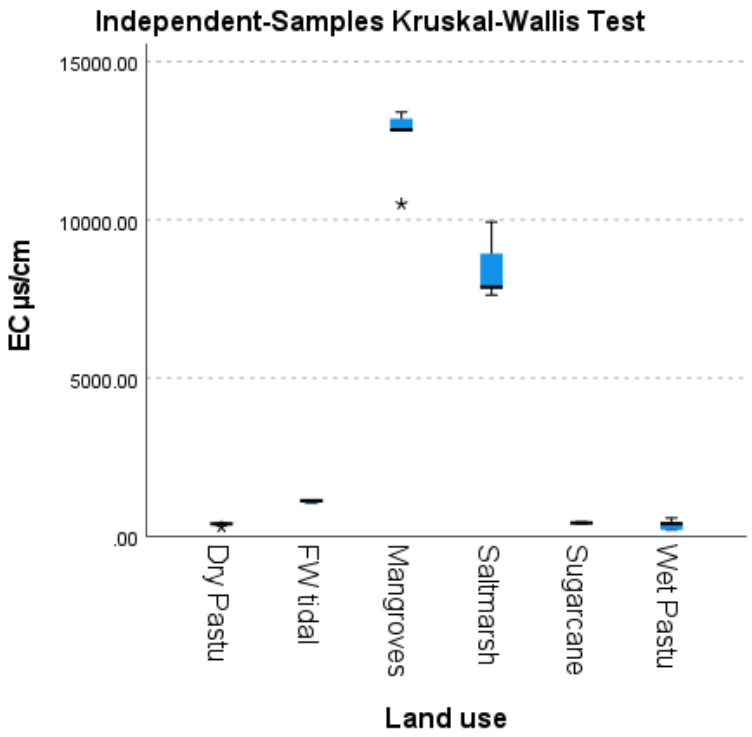
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

EC µs/cm across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	26.012[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Land use

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Dry Pastu-Wet Pastu	-.800	5.568	-.144	.886	1.000
Dry Pastu-Sugarcane	-5.200	5.568	-.934	.350	1.000
Dry Pastu-FW tidal	-12.000	5.568	-2.155	.031	.467
Dry Pastu-Saltmarsh	-17.000	5.568	-3.053	.002	.034
Dry Pastu-Mangroves	-22.000	5.568	-3.951	.000	.001
Wet Pastu-Sugarcane	4.400	5.568	.790	.429	1.000
Wet Pastu-FW tidal	11.200	5.568	2.012	.044	.664
Wet Pastu-Saltmarsh	16.200	5.568	2.910	.004	.054
Wet Pastu-Mangroves	21.200	5.568	3.808	.000	.002
Sugarcane-FW tidal	6.800	5.568	1.221	.222	1.000
Sugarcane-Saltmarsh	11.800	5.568	2.119	.034	.511
Sugarcane-Mangroves	16.800	5.568	3.017	.003	.038
FW tidal-Saltmarsh	-5.000	5.568	-.898	.369	1.000
FW tidal-Mangroves	-10.000	5.568	-1.796	.072	1.000
Saltmarsh-Mangroves	5.000	5.568	.898	.369	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

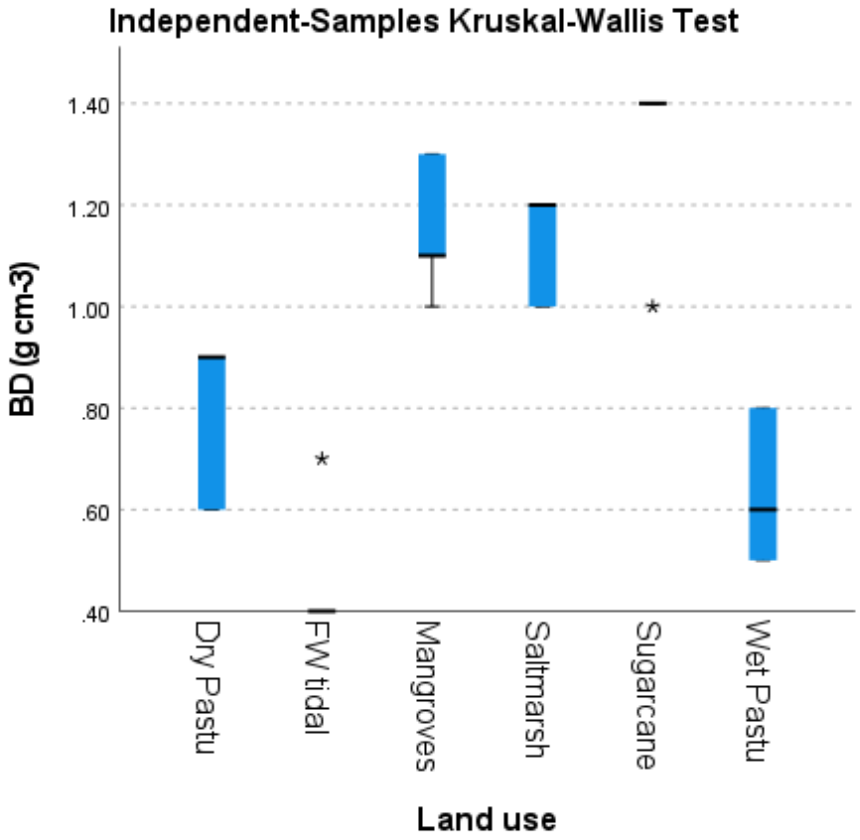
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

BD (g cm-3) across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	25.002[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Land use

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
FW tidal-Wet Pastu	-4.400	5.539	-.794	.427	1.000
FW tidal-Dry Pastu	7.600	5.539	1.372	.170	1.000
FW tidal-Saltmarsh	-16.800	5.539	-3.033	.002	.036
FW tidal-Mangroves	-17.900	5.539	-3.232	.001	.018
FW tidal-Sugarcane	-22.300	5.539	-4.026	.000	.001

Wet Pastu-Dry Pastu	3.200	5.539	.578	.563	1.000
Wet Pastu-Saltmarsh	12.400	5.539	2.239	.025	.378
Wet Pastu-Mangroves	13.500	5.539	2.437	.015	.222
Wet Pastu-Sugarcane	17.900	5.539	3.232	.001	.018
Dry Pastu-Saltmarsh	-9.200	5.539	-1.661	.097	1.000
Dry Pastu-Mangroves	-10.300	5.539	-1.859	.063	.944
Dry Pastu-Sugarcane	-14.700	5.539	-2.654	.008	.119
Saltmarsh-Mangroves	1.100	5.539	.199	.843	1.000
Saltmarsh-Sugarcane	-5.500	5.539	-.993	.321	1.000
Mangroves-Sugarcane	-4.400	5.539	-.794	.427	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

C (%) across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	26.179[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.

Pairwise Comparisons of Land use

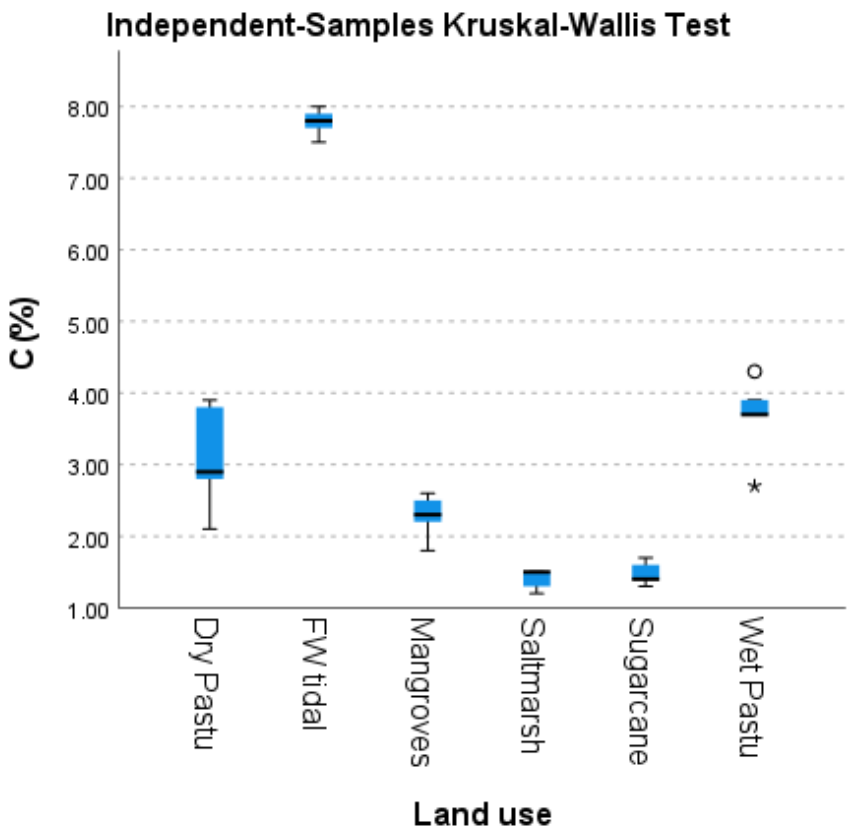
Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Saltmarsh-Sugarcane	-1.200	5.563	-.216	.829	1.000
Saltmarsh-Mangroves	8.900	5.563	1.600	.110	1.000
Saltmarsh-Dry Pastu	14.000	5.563	2.517	.012	.178
Saltmarsh-Wet Pastu	-16.400	5.563	-2.948	.003	.048
Saltmarsh-FW tidal	23.100	5.563	4.153	.000	.000
Sugarcane-Mangroves	7.700	5.563	1.384	.166	1.000
Sugarcane-Dry Pastu	12.800	5.563	2.301	.021	.321
Sugarcane-Wet Pastu	-15.200	5.563	-2.732	.006	.094
Sugarcane-FW tidal	21.900	5.563	3.937	.000	.001
Mangroves-Dry Pastu	5.100	5.563	.917	.359	1.000
Mangroves-Wet Pastu	-7.500	5.563	-1.348	.178	1.000
Mangroves-FW tidal	14.200	5.563	2.553	.011	.160

Dry Pastu-Wet Pastu	-2.400	5.563	-.431	.666	1.000
Dry Pastu-FW tidal	-9.100	5.563	-1.636	.102	1.000
Wet Pastu-FW tidal	6.700	5.563	1.204	.228	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

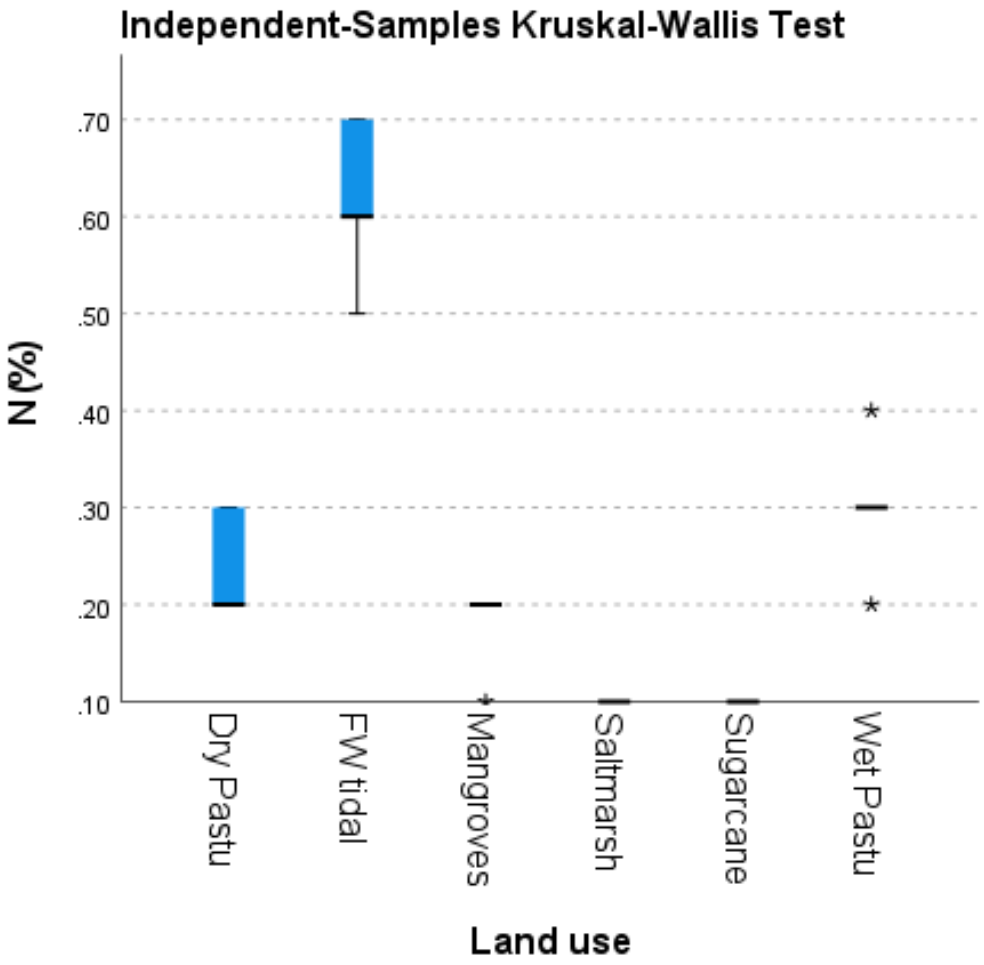


N (%) across Land use

Independent-Samples Kruskal-Wallis Test Summary

Total N	30
Test Statistic	26.486[a]
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Land use

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
Saltmarsh-Dry Pastu	12.100	5.362	2.257	.024	.361
Sugarcane-Dry Pastu	12.100	5.362	2.257	.024	.361
Saltmarsh-FW tidal	22.000	5.362	4.103	.000	.001
Sugarcane-FW tidal	22.000	5.362	4.103	.000	.001
Saltmarsh-Mangroves	7.600	5.362	1.417	.156	1.000
Sugarcane-Mangroves	7.600	5.362	1.417	.156	1.000
Saltmarsh-Sugarcane	.000	5.362	.000	1.000	1.000
Saltmarsh-Wet Pastu	-15.300	5.362	-2.853	.004	.065
Sugarcane-Wet Pastu	-15.300	5.362	-2.853	.004	.065
Mangroves-Dry Pastu	4.500	5.362	.839	.401	1.000
Mangroves-Wet Pastu	-7.700	5.362	-1.436	.151	1.000
Mangroves-FW tidal	14.400	5.362	2.686	.007	.109
Dry Pastu-Wet Pastu	-3.200	5.362	-.597	.551	1.000

Dry Pastu-FW tidal	-9.900	5.362	-1.846	.065	.973
Wet Pastu-FW tidal	6.700	5.362	1.250	.211	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Physiochemical properties across different depths (Kruskal-Wallis test)

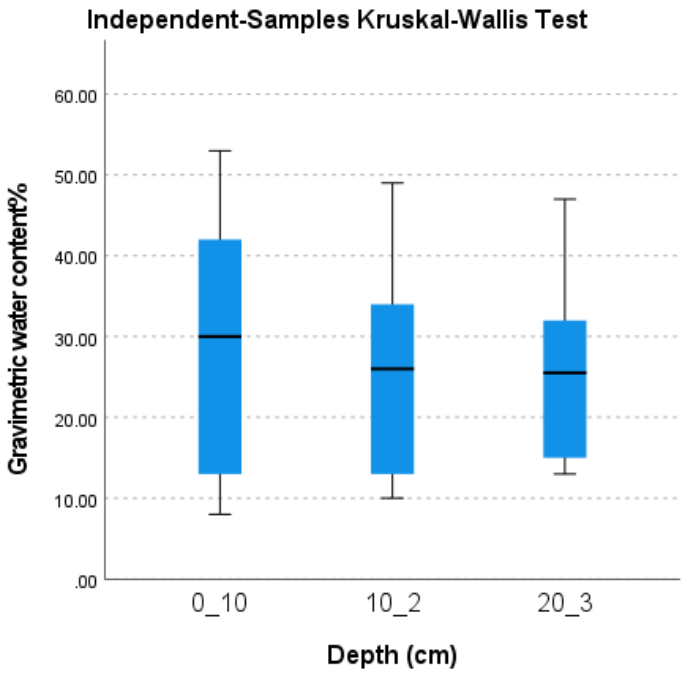
Gravimetric water content% across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	.268[a,b]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.875

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.



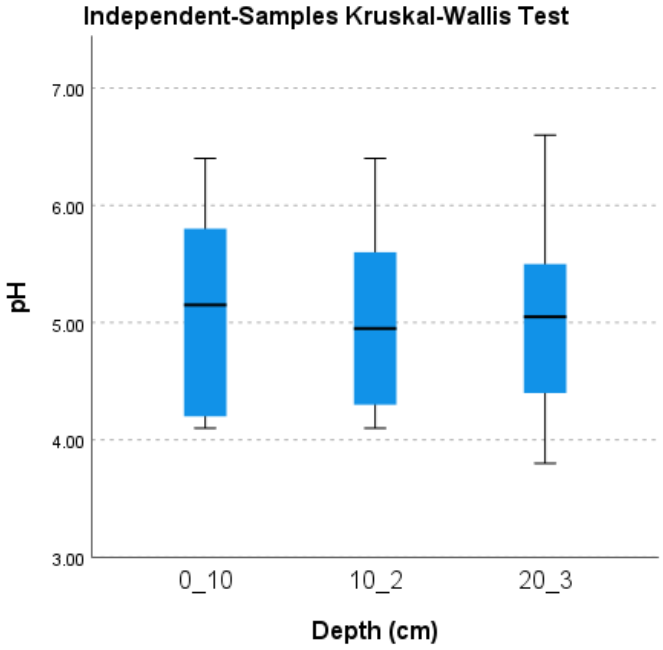
pH across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	.109[a,b]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.947

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.



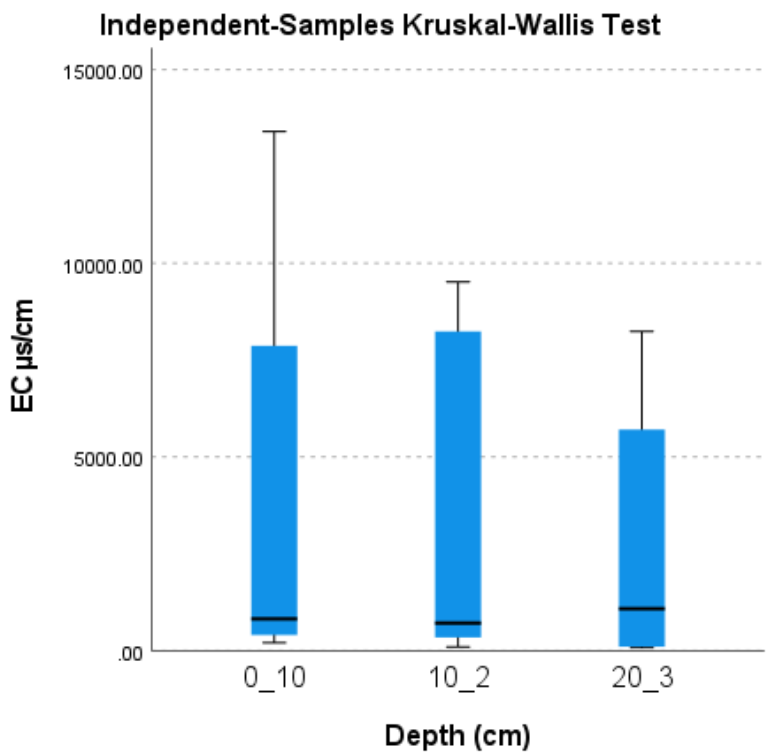
EC µs/cm across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	5.134[a,b]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.077

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

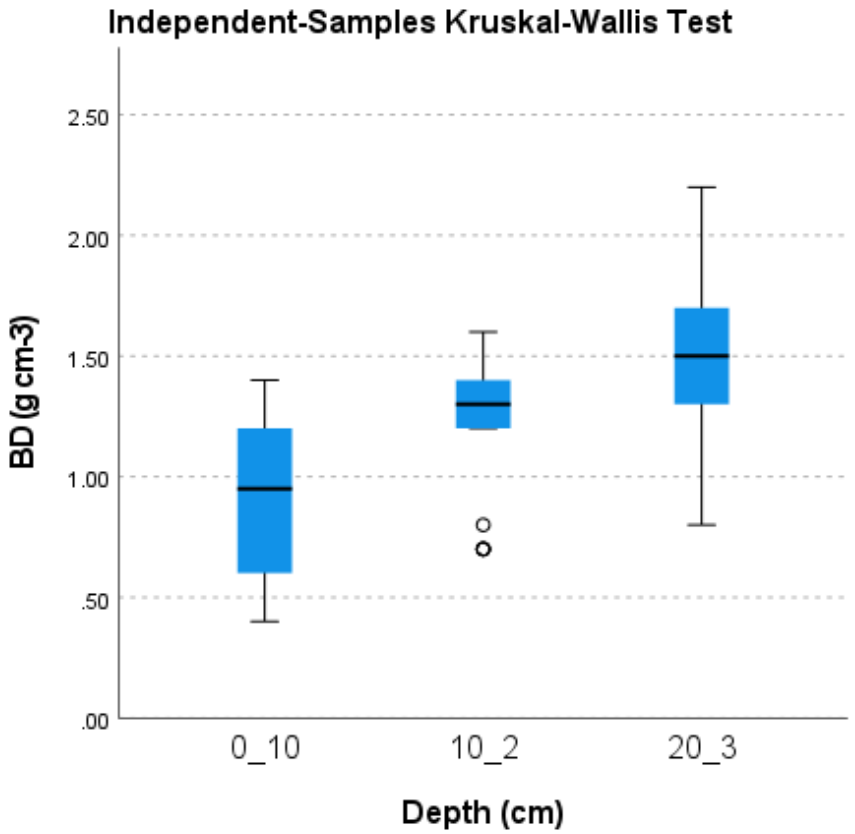


BD (g cm-3) across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	25.994[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Depth (cm)

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
0_10-10_2	-21.317	6.710	-3.177	.001	.004
0_10-20_3	-33.833	6.710	-5.042	.000	.000
10_2-20_3	-12.517	6.710	-1.865	.062	.186

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

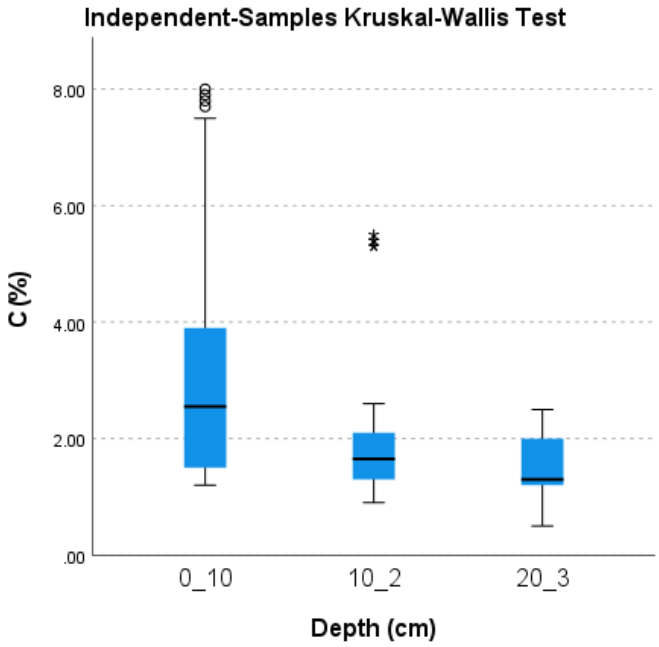
C (%) across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	20.407[a]
Degree Of Freedom	2

Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Depth (cm)

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
20_3-10_2	13.367	6.730	1.986	.047	.141
20_3-0_10	30.333	6.730	4.507	.000	.000
10_2-0_10	16.967	6.730	2.521	.012	.035

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

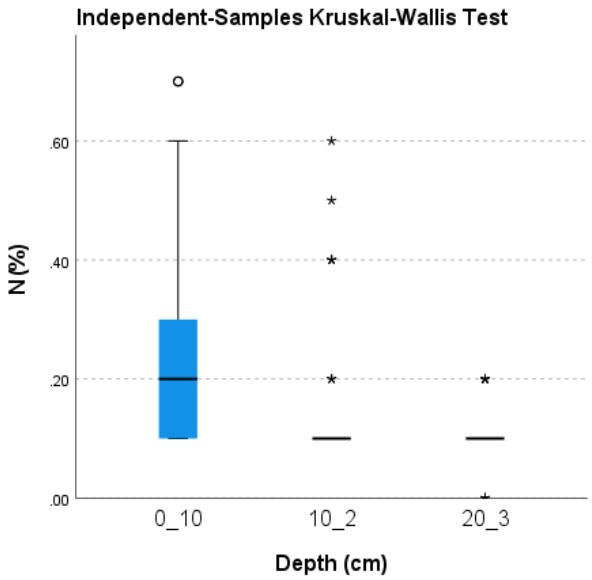
a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

N (%) across Depth (cm)

Independent-Samples Kruskal-Wallis Test Summary

Total N	90
Test Statistic	21.467[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.000

a. The test statistic is adjusted for ties.



Pairwise Comparisons of Depth (cm)

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.[a]
20_3-10_2	10.117	5.861	1.726	.084	.253
20_3-0_10	26.883	5.861	4.587	.000	.000
10_2-0_10	16.767	5.861	2.861	.004	.013

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .050.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.