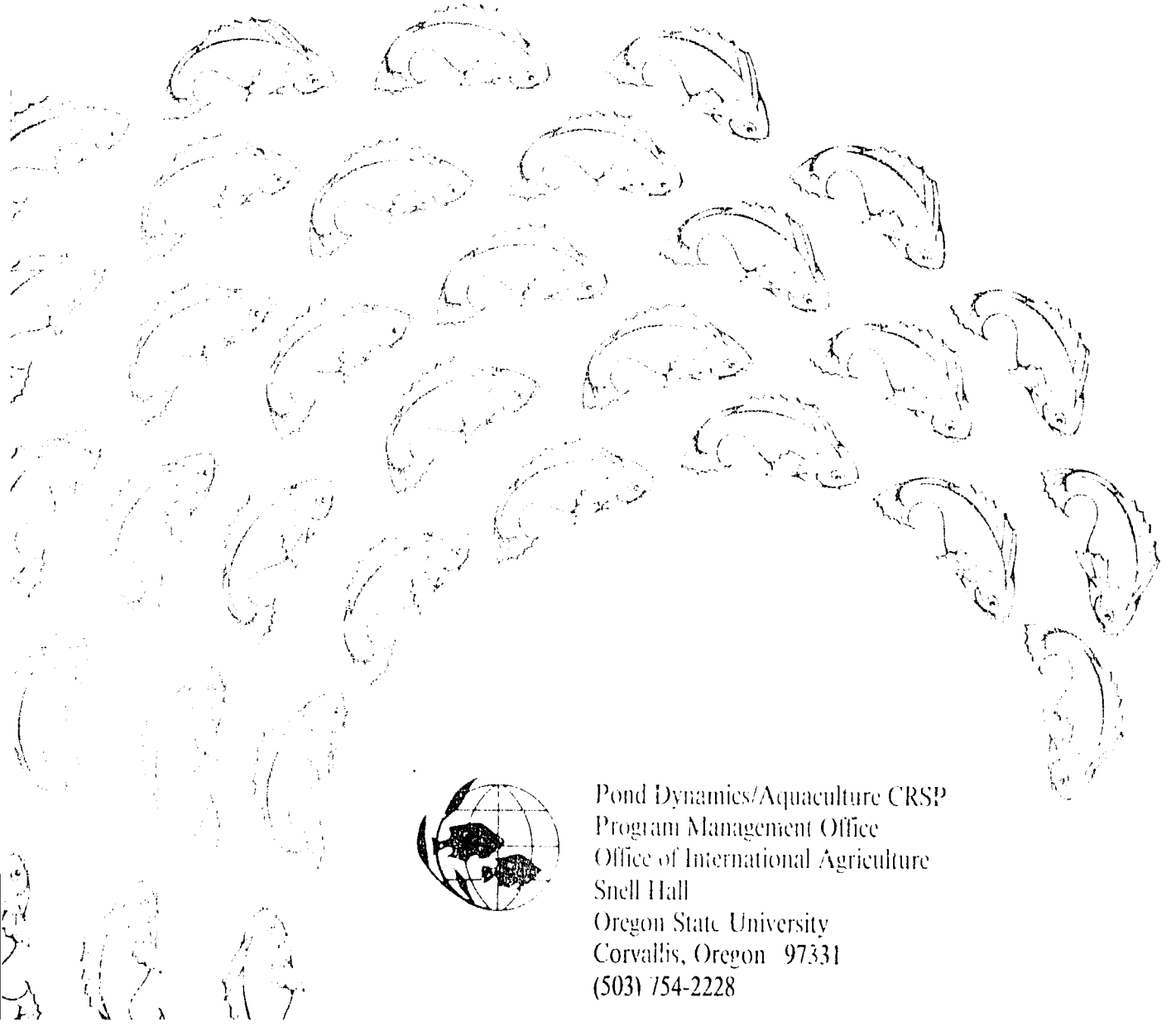
PN-AAZ-936

Pond Dynamics/Aquaculture Collaborative Research Data Reports

Volume Two: Thailand Project

Cycle I of the Global Experiment



Pond Dynamics/Aquaculture CRSP
Program Management Office
Office of International Agriculture
Snell Hall
Oregon State University
Corvallis, Oregon 97331
(503) 754-2228

POND DYNAMICS/AQUACULTURE COLLABORATIVE RESEARCH DATA REPORTS

Volume Two. Thailand: Cycle 1 of
The Global Experiment

November 4, 1987

James S. Diana, C. Kwei Lin,
Thiraphan Bhukaswan, and Vijai Sirsuwanatach

Edited by Hillary S. Egna

Pond Dynamics / Aquaculture
Collaborative Research Support Program
Office Of International Research and Development
Snell Hall
Oregon State University
Corvallis, Oregon 97331 USA

DISCLAIMER

The contents of this document do not necessarily represent an official position or policy of the U.S. Agency for International Development. Also, the mention of trade names or commercial products in this report does not constitute endorsement or recommendation for use on the part of the U.S. Agency for International Development or the Pond Dynamics/Aquaculture Collaborative Research Support Program.

TABLE OF CONTENTS

	page
FOREWORD	3
INTRODUCTION	5
MATERIALS AND METHODS	5
RESULTS	5
DISCUSSION	6
APPENDIX. Complete set of data from Cycle I of the Pond Dynamics/ Aquaculture CRSP in Thailand	19

LIST OF FIGURES AND TABLES

		page
Table 1a.	Soil analysis from the 12 experimental ponds at Nong Sua Hatchery	7
Table 1b.	Soil analysis from the 12 experimental ponds at Ayutthaya Hatchery	7
Table 2.	Size, yield, and growth data for fish stocked at Ayutthaya or Nong Sua and cultured for 120 days	8
Figure 1.	Annual rainfall pattern (cm/month) for Thailand. Wet season experiments were August to January 1984, dry season experiments were January to June 1984	9
Figure 2.	Mean (±SD) monthly water depth (cm) in CRSP experimental ponds	10
Figure 3.	Mean (±SD) monthly orthophosphate concentrations (ug/L) in CRSP experimental ponds	11
Figure 4.	Mean monthly (±SD) ammonia concentrations (ug/L) in CRSP experimental ponds	12
Figure 5.	Mean (±SD) dissolved oxygen levels (mg/L) at the surface and bottoms of CRSP experimental ponds for six diurnal cycles at Ayutthaya	13
Figure 6.	Mean (±SD) weekly dissolved oxygen (mg/L) in CRSP experimental ponds	14
Figure 7.	Mean (±SD) weekly chlorophyll a concentration (mg/m^3) in CRSP experimental ponds	15
Figure 8.	Mean (±SD) monthly primary production (g $C/m^3/d$) for CRSP experimental ponds in the wet season	16
Figure 9.	Mean (±SD) monthly fish weight (g) in CRSP experimental ponds	17

FOREWORD

The Pond Dynamics/Aquaculture Collaborative Research Support Program (PD/A CRSP) represents an international community of researchers and institutions dedicated to strengthening health and nutrition in developing countries by improving the efficiency of pond aquaculture systems. It is one of several agricultural CRSPs supported by the U.S. Agency for International Development under the authority of Title XII of the International Development and Food Assistance Act of 1975.

The "global experiment" in Pond Dynamics/Aquaculture is the major CRSP research activity, covering the period from 1982 to 1987. The global experiment was designed to quantitatively describe the physical, chemical and biological principles of pond culture systems. The information gained from the global experiment will be used to improve production technologies and develop quantitative production functions to facilitate rigorous economic analyses of aquaculture systems.

Standardization is a key element of the global experiment. Standardization permits the comparison of data from diverse geographic locations. The experimental design involves monitoring specified environmental and fish production variables in accordance with standardized work plans in twelve or more ponds at each of seven geographical locations. The variables observed, frequency of observation, and materials and methods are uniform for all locations. The field data are filed in a centralized data base, called the CRSP Data Base. Statistical methods will be used to test hypotheses about correlations between variables and to evaluate the sources of variance within ponds, between ponds within locations, and between locations.

The CRSP Data Base will be used to develop predictive models of the processes occurring in pond culture systems. The models will be used to: provide guidance for ongoing and future research; predict the performance of existing and proposed pond systems subject to specific inputs and constraints; and improve the operation and efficiency of pond culture systems.

The global experiment includes three cycles of experiments. Each cycle consists of two series of observations, one during the dry season and one during the wet season. The objective of the first cycle is to create a detailed baseline of chemical, physical, and biological data on all ponds treated with a standard level of inorganic fertilizer. In the second experimental cycle, ponds treated with inorganic fertilizer are compared to ponds treated with organic fertilizer. In the third cycle, the responses of ponds to different levels of organic fertilizer are compared.

The goal of the Pond Dynamics/Aquaculture Collaborative Research Data Reports (referred to as Data Reports) is to record the PD/A CRSP Data Base and to present interpretations of site specific results. The PD/A CRSP has conducted the global experiment at seven project sites in six developing countries: Thailand, Indonesia, the Philippines, Panama, Honduras, and Rwanda. The first volume of these reports provides descriptive information for each of the PD/A CRSP sites. It presents the physical characteristics of each site, including a geographical sketch, climatology, and water and soil analyses. Experimental cycles are described in PD/A CRSP Work Plans 1 to 3, which are summarized in the first volume.

Volume One will serve as the reference volume for the entire report series. Subsequent volumes will focus on each site separately. Each volume will include one cycle (wet and dry seasons) of the PD/A CRSP global experiment. Therefore, with few exceptions, each project site will have three volumes devoted to it, representing the results of the three cycles of the global experiment. Cycle I of the Global Experiment in Thailand is presented in this second volume.

INTRODUCTION

The Pond Dynamics/Aquaculture CRSP conducted a series of experiments on pond culture systems around the world. The first set of experiments was designed to evaluate pond dynamics under low nutrient input rates during wet and dry seasons. This report covers the first cycle for experiments conducted in Thailand. First cycle, dry season experiments were conducted from 5 January to 4 June 1984, in ten ponds at the Nong Sua Fish Hatchery, located 100 km northeast of Bangkok. First cycle, wet season experiments were conducted from 1 August to 31 December 1984, in 12 ponds at Ayutthaya Fishery Station, 60 km northwest of Bangkok.

The purpose of the first cycle experiments was to evaluate physical, chemical, and biological changes in aquaculture ponds treated with low nutrient input, and to determine the statistical variation between ponds.

MATERIALS AND METHODS

Ponds were monitored regularly for the physical, chemical and biological processes listed below. Frequency of the measurements varied from daily to monthly with each parameter. The specific variables measured and the frequency of measurement are described in Volume I of the Data Reports. Variables monitored included rainfall, air temperature, pond depth, ammonia, orthophosphate, dissolved oxygen, pH, mean fish weight, and total fish yield. Measurements at Ayutthaya also included alkalinity, hardness, nitrate-nitrite, total phosphorus, secchi disk depth, chlorophyll *a* concentration, primary productivity, solar radiation, and wind velocity.

Ponds were treated with P_2O_5 at 8 kg/ha/mo. They were stocked with Oreochromis niloticus at one fish per m^2. The experiment lasted 150 days. In addition to water and weather sampling, soil chemistry was analyzed for each site.

RESULTS

Pond soil characteristics at Nong Sua (Table 1a) and Ayutthaya (Table 1b) differ primarily with respect to pH. Nong Sua is characterized by acid-sulfate soil (pH 4.1) and Ayutthaya by slightly alkaline soil (pH 7.4). Pond soil analyses also showed differences in aluminum (40 ppm at Ayutthaya vs. 1131 ppm at Nong Sua), and to a smaller degree calcium, magnesium, and iron.

The meteorological data at Ayutthaya indicate that the wet season of 1984 was drier than the dry season, and had one-fifth or less of the level of precipitation in 1983 (Figure 1). Due partly to the lack of rain, air temperature was very warm during both seasons, with extremes of 17 and 42°C, and an average minimum of 26°C and maximum of 37°C. Most other weather parameters were similar with little variation for both seasons.

Physical characteristics of the ponds also showed the results of low rainfall in both seasons. Pond depth (Figure 2) was often less than 1 m, and fell to 0.6 m in spite of pumping to maintain water levels. Pond water temperatures were very warm with an average daily minimum of 27°C and maximum of 33°C. There was a large diel cycle of temperature, with daily fluctuations of 7 to 10°C.

The water chemistry at Nong Sua and Ayutthaya was similar. Ponds at both sites showed some

seasonal trends. Phosphate (Figure 3) and ammonia (Figure 4) were very low except immediately after fertilization. Phosphate and Ammonia showed variability between ponds, although this was more pronounced for ammonia. The low trophic state of the ponds is indicated by dissolved oxygen levels, which were generally high. Dissolved oxygen levels showed a very small diel excursion (Figure 5), and had little, if any, seasonal trends (Figure 6).

The biological data generated in this cycle were difficult to evaluate. Chlorophyll *a* levels in the pond were relatively consistent at Ayutthaya, but not at Nong Sua (Figure 7). However, at Ayutthaya, there was no correlation between chlorophyll *a* levels and primary productivity, which increased throughout the cycle (Figure 8). Also, primary productivity was not correlated with fish growth, which was consistent over time (Figure 9). Physical and biological data were often variable between ponds; however, there were no significant differences between ponds (Anova, $P>0.05$). Therefore, although pond trends were transient in time, they followed consistent overall averages.

Fish growth and yield were very similar in both seasons (Table 2). This occurred in spite of our poor record of sorting sexes during the dry season; the wet season yielded a more acceptable sex ratio. Mean survival of fish was very good (95%), while mean yield was low (376 kg/ha). This was due to very slow mean growth, only 0.28 g/day. (Normal growth is about 1 g/day.)

DISCUSSION

The pond dynamics of Cycle 1 were dominated by low nutrient input and low yield. The nutrient limitations appeared in both nitrogen and phosphorus. This should be taken into account in future experimental designs.

Due to weather, few differences were noted in production for wet and dry season data. Whether this is typical of all locations or due to our circumstances remains to be seen.

The changing of sites also had little or no effect on our data. The only clear difference between Ayutthaya and Nong Sua is that variances between ponds in chemical parameters, especially chlorophyll *a*, was very high at Nong Sua. Apparently, liming corrected most low pH effects at Nong Sua, at least over our experimental period.

Finally, the low correlation between primary productivity and fish yield indicates some basic problems in design. Either our methods are inadequate to determine this correlation, or else Tilapia primarily utilize other energy pathways. Utilization or detritus for food by Tilapia is not being evaluated in our experiment.

Table 1a. Soil analysis from the 12 experimental ponds at Nong Sua Hatchery.

Pond No.	Lime Req.	pH	SO_4-S ppm	P ppm	K ppm	Ca meq/100 g	Mg meq/100 g	Total P ppm	Al ppm	Fe ppm	% Sand	%Silt	% Clay	Texture
1	20.8	4.4	133.33	3	157	1560	345	360	1160	127.2	12	18	70	Clay
2	21.05	4.3	110	3	142	1620	300	480	680	115.2	10	24	66	Clay
3	19.85	4.0	133.33	3	142	1060	320	380	840	165.6	10	24	66	Clay
4	19.9	4.3	133.33	3	127	840	280	400	2560	106.4	10	24	66	Clay
5	20.3	4.2	303.33	3	131	960	320	420	140	95.2	12	23	65	Clay
6	19.8	4.0	210	3	137	900	425	340	180	127.2	8	26	66	Clay
7	20.1	3.9	190	3	127	800	370	420	1150	142.4	10	24	66	Clay
8	16.6	4.0	140	3	132	820	320	440	960	137.8	10	24	66	Clay
9	19.6	4.1	160	3	155	960	320	480	620	131.2	12	24	64	Clay
10	17.6	4.1	133.33	3	146	940	320	440	2000	131.2	8	25	67	Clay
11	20.1	4.1	190	3	146	1040	345	420	1280	104.8	9	23	68	Clay
12	20.4	4.1	190	3	142	1350	345	400	2000	154.8	7	24	69	Clay

Table 1b. Soil analysis from the 12 experimental ponds at Ayutthaya Hatchery.

Pond No.	Lime Req.	pH	SO_4-S ppm	P ppm	K ppm	Ca meq/100 g	Mg meq/100 g	Total P ppm	Al ppm	Fe ppm	% Sand	%Silt	% Clay	Texture
1	--	7.0	85.42	--	98	3760	1250	450	25	20	10	23	67	Clay
2	--	7.6	88.54	--	214	4480	1150	420	36	28	14	24	62	Clay
3	--	7.5	77.08	--	98	3700	1105	406	44	8	10	24	66	Clay
4	--	7.5	102.08	--	105	4480	1650	450	22	20	10	22	68	Clay
5	--	7.0	77.08	--	112	3940	1300	450	96	35	13	23	64	Clay
6	--	7.5	91.67	--	126	4680	1250	420	36	8	11	20	69	Clay
7	--	7.4	116.67	--	124	5160	1250	420	52	35	12	23	66	Clay
8	--	7.4	169.79	--	118	4040	1200	420	48	38	10	24	66	Clay
9	--	7.4	112.50	--	108	5250	1500	450	46	20	12	20	68	Clay
10	--	7.5	116.67	--	98	4360	1150	420	30	20	10	21	69	Clay
11	--	7.6	82.29	--	87	3700	1370	390	22	16	9	21	70	Clay
12	--	7.3	104.17	--	112	1110	1110	460	28	20	14	23	63	Clay

Table 2. Size, yield, and growth data for fish stocked at Ayutthuya or Nong Sua and cultured for 120 days.

	Ayutthaya	Nong Sua
Initial Size (g)	34.0	26.8
Final Size	70.6	75.0
Growth - g	36.6	48.2
- g/day	0.24	0.32
Gross Yield (kg)	17.0	35.1
(kg/ha)	681.0	702.0
Net Yield (kg)	8.5	20.6
(kg/ha)	340.0	412.0
Survival	96%	94%

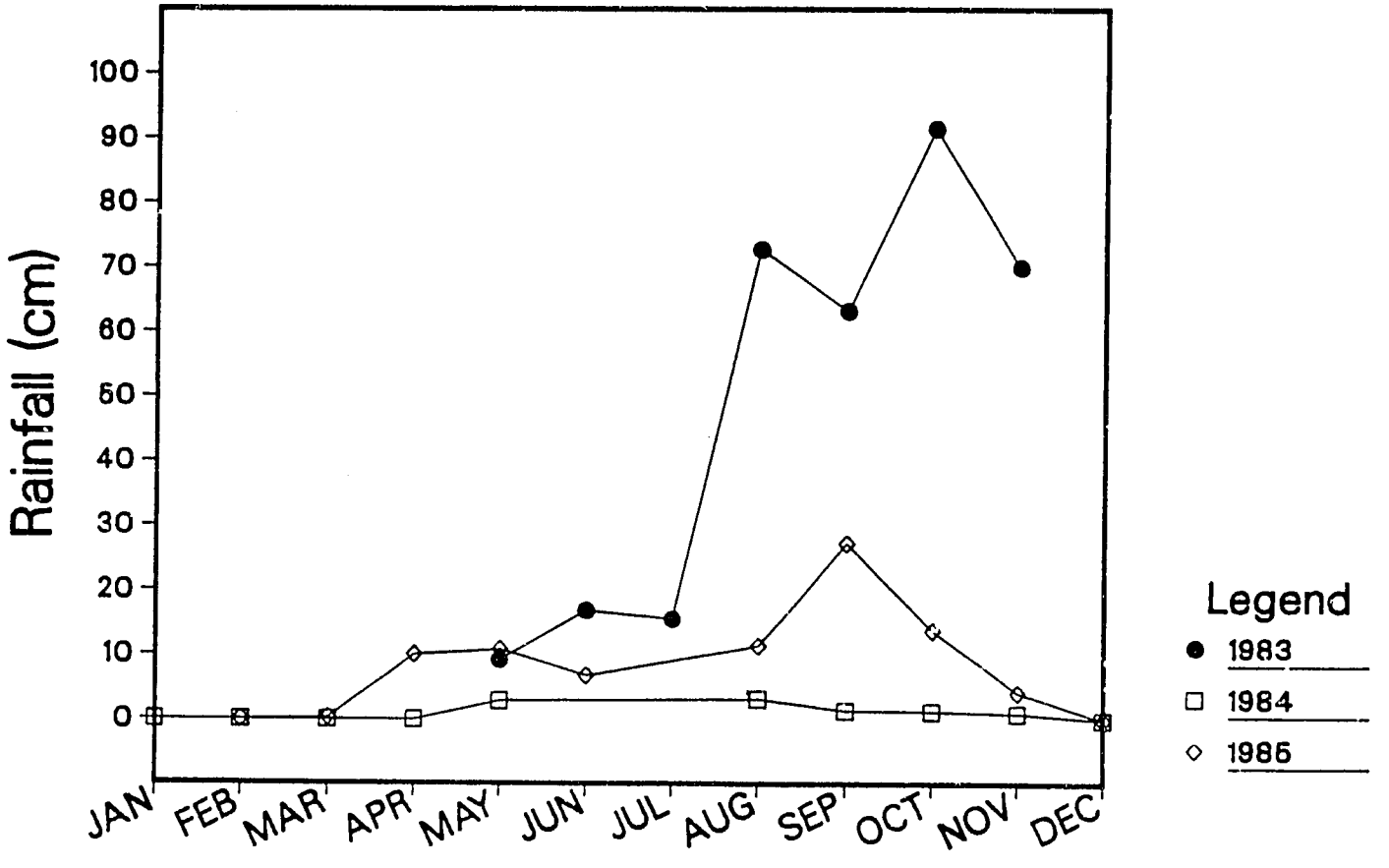


Figure 1. Annual rainfall pattern (cm/month) for Thailand. Wet season experiments were August to January 1984, dry season experiments were January to June 1984.

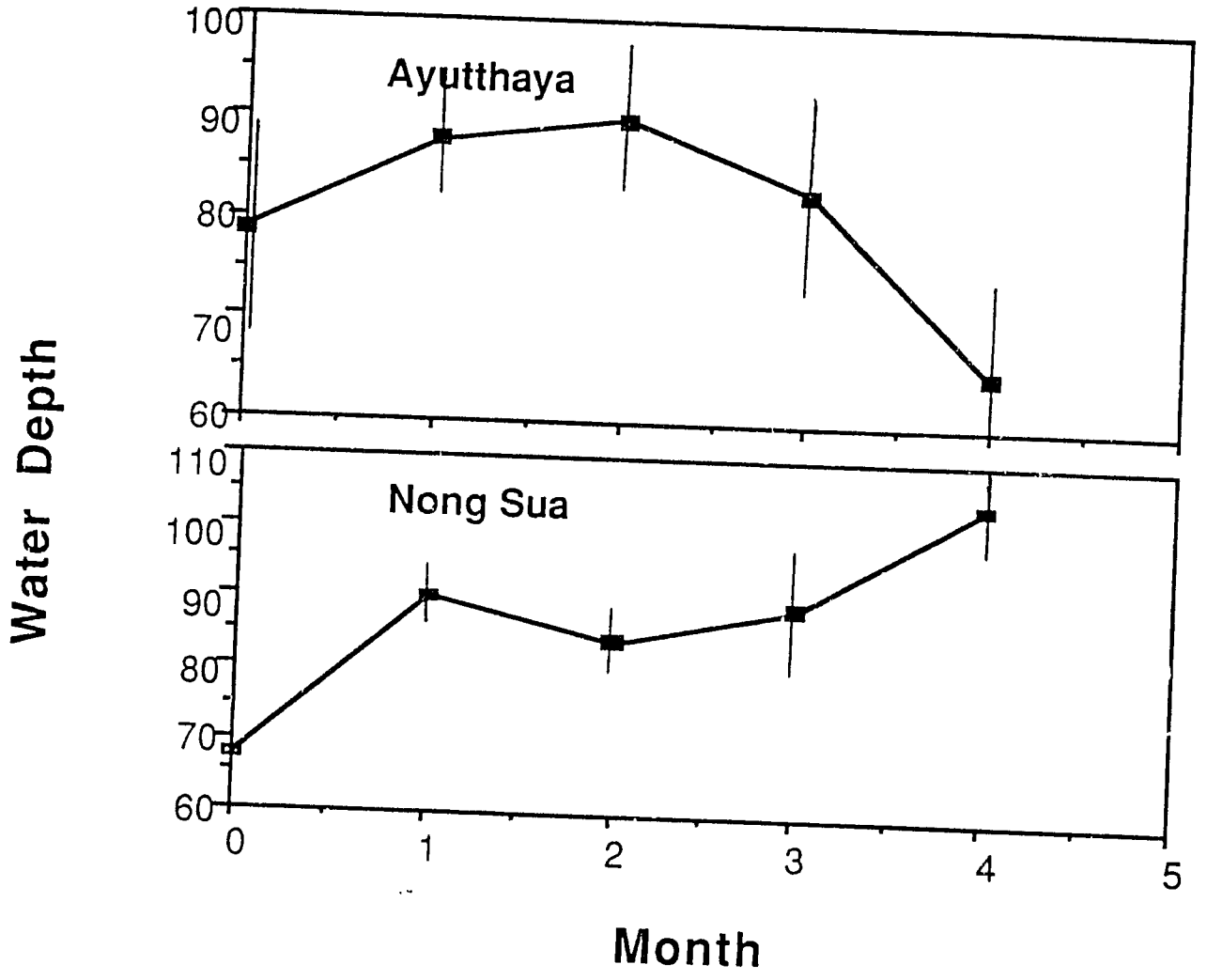


Figure 2. Mean (±SD) monthly water depth (cm) in CRSP experimental ponds.

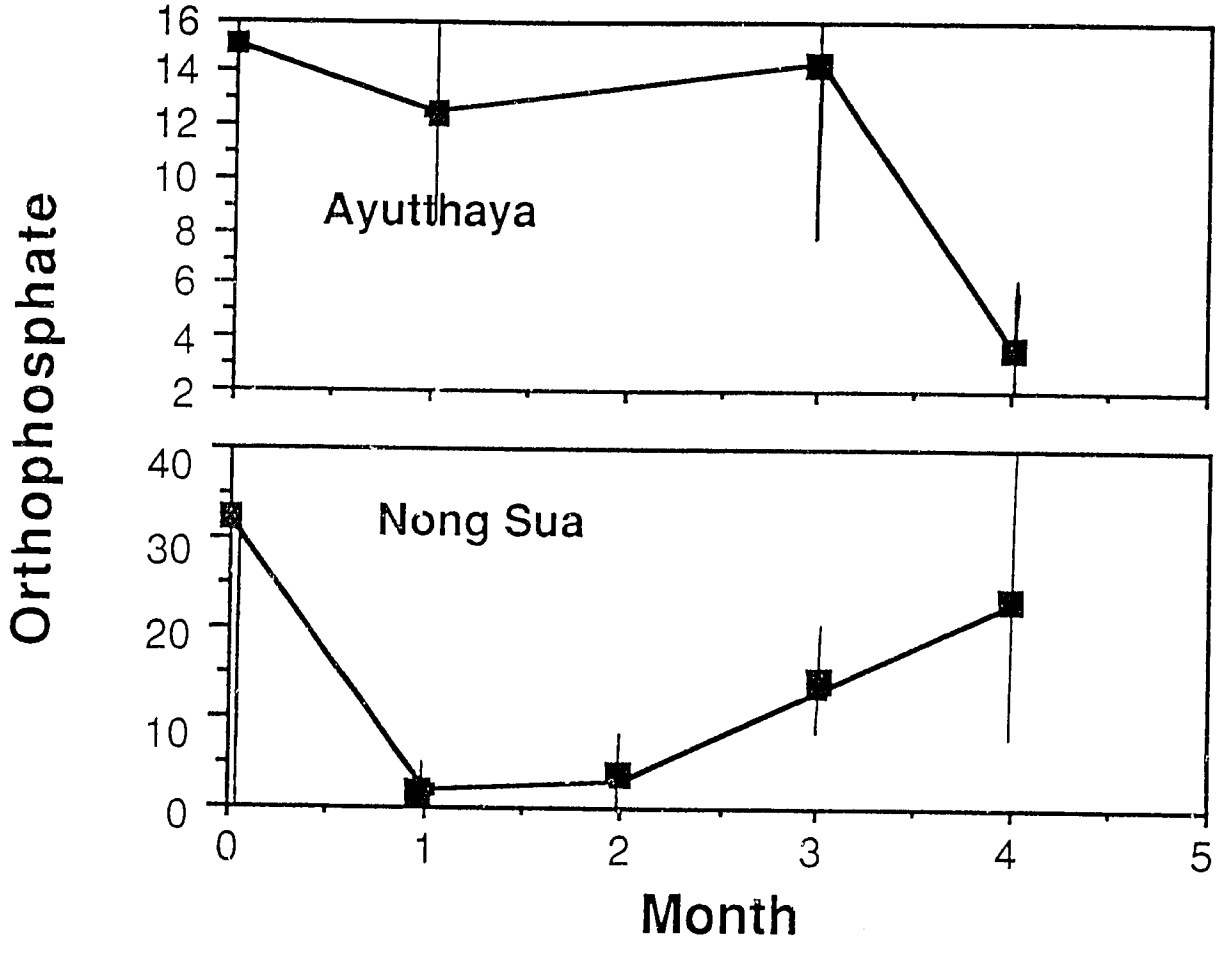


Figure 3. Mean (±SD) monthly orthophosphate concentrations (ug/L) in CRSP experimental ponds.

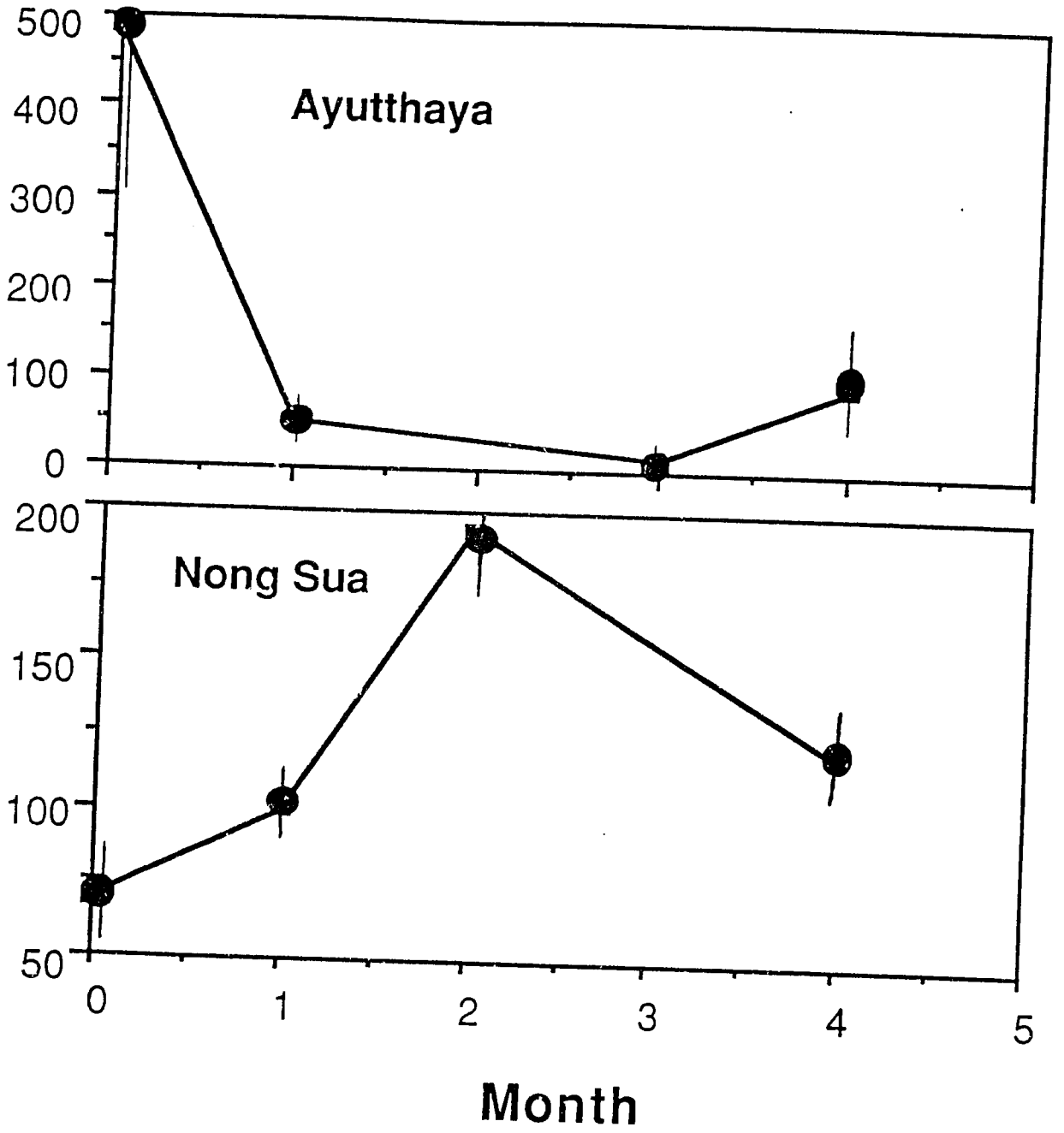


Figure 4. Mean monthly (±SD) ammonia concentrations (ug/L) in CRSP experimental ponds.

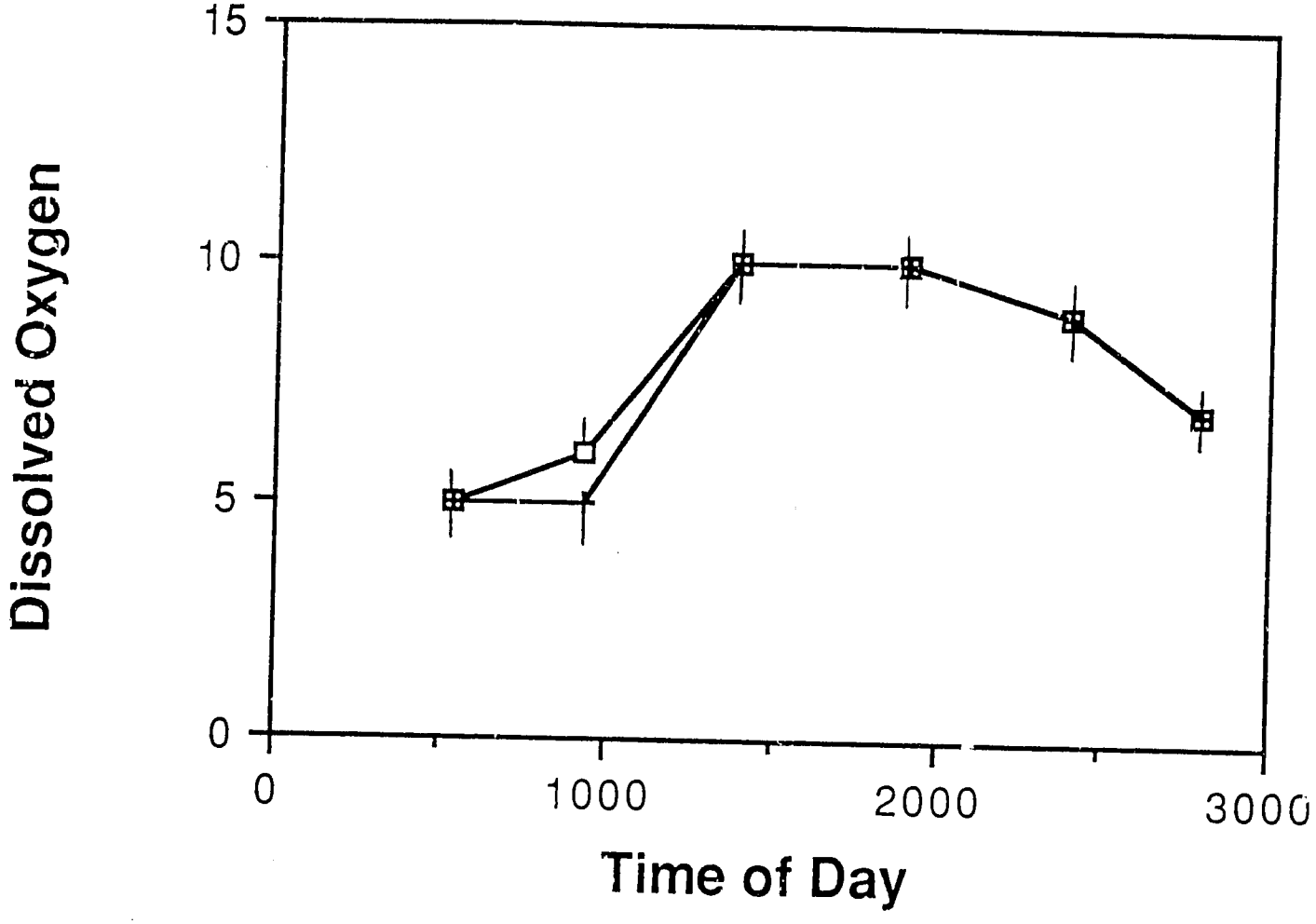


Figure 5. Mean (±SD) dissolved oxygen levels (mg/L) at the surface (squares) and bottoms (crosses) of CRSP experimental ponds for six diurnal cycles at Ayutthaya.

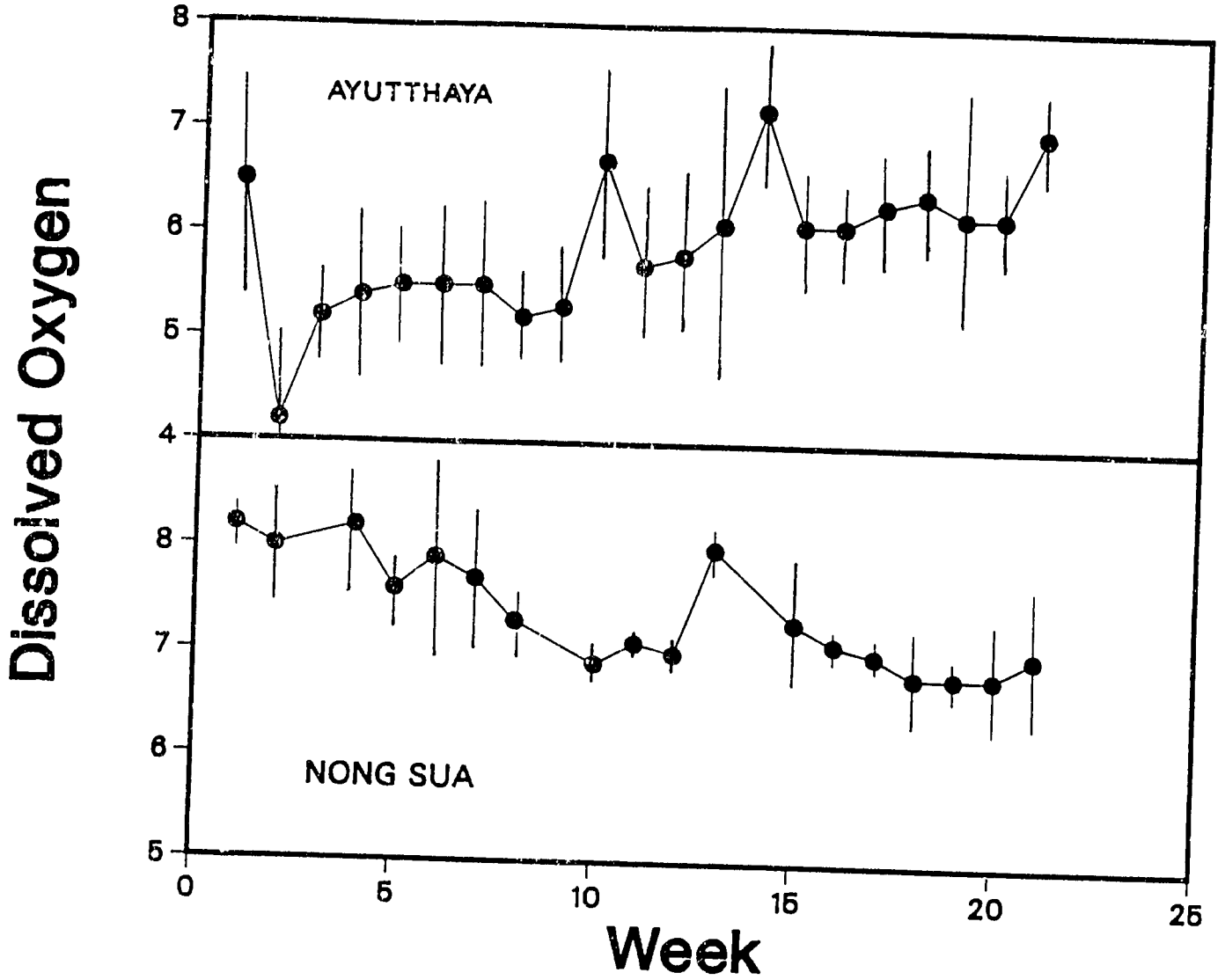


Figure 6. Mean (±SD) weekly dissolved oxygen (mg/L) in CRSP experimental ponds.

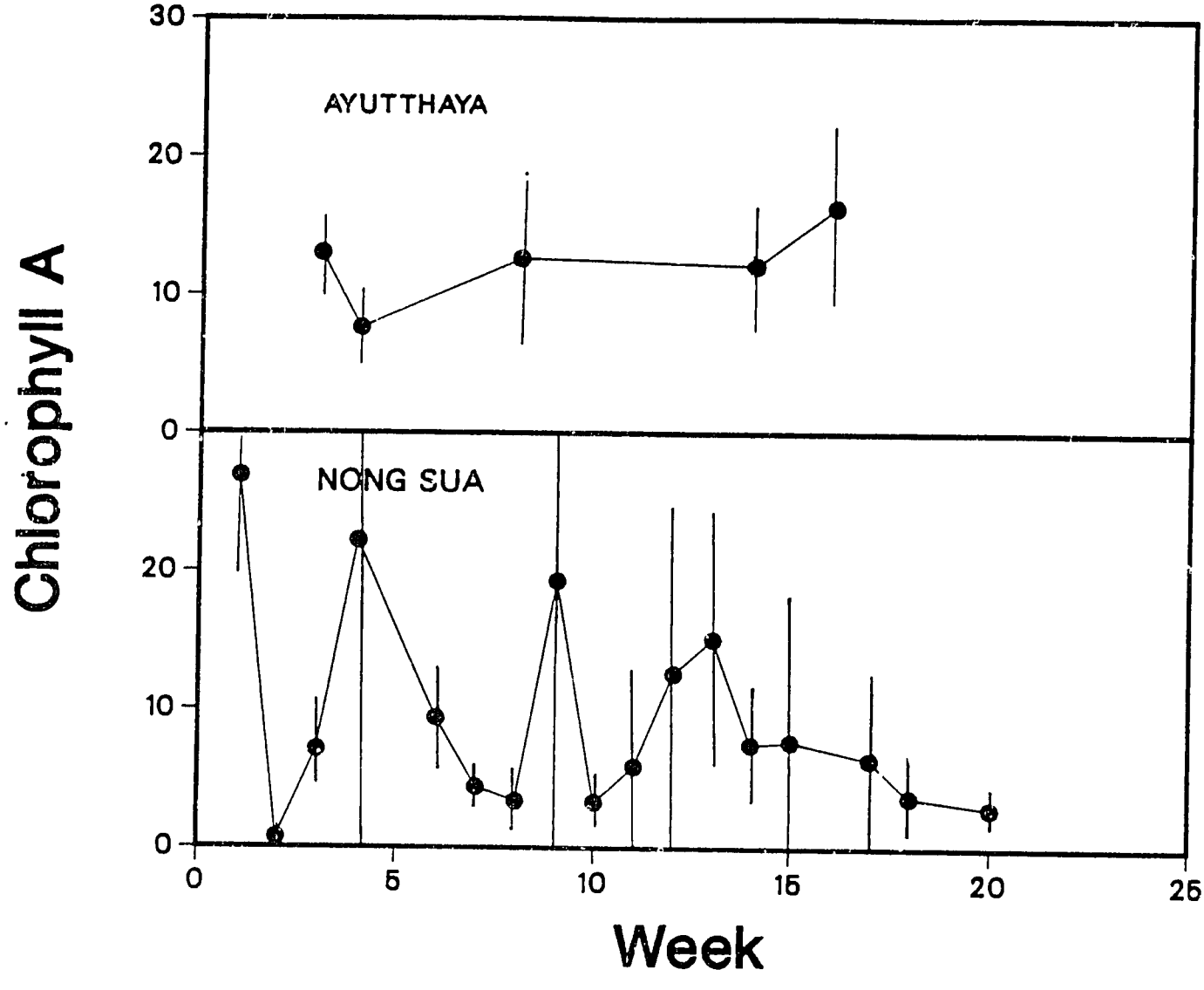


Figure 7. Mean (±SD) weekly chlorophyll a concentration (mg/m^3) in CRSP experimental ponds.

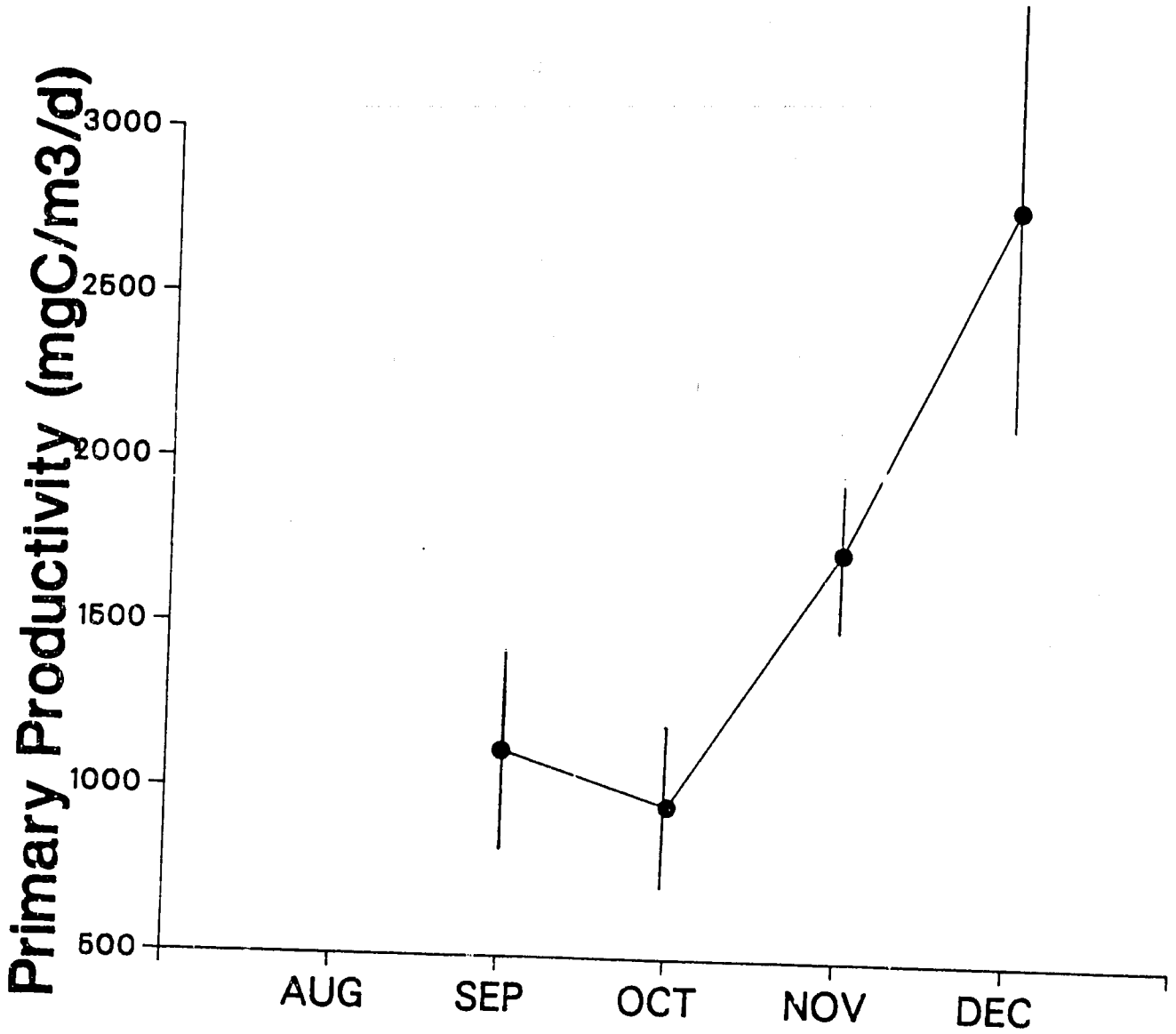


Figure 8. Mean (±SD) monthly primary production (g C/m^3/d) for CRSP experimental ponds in the wet season.

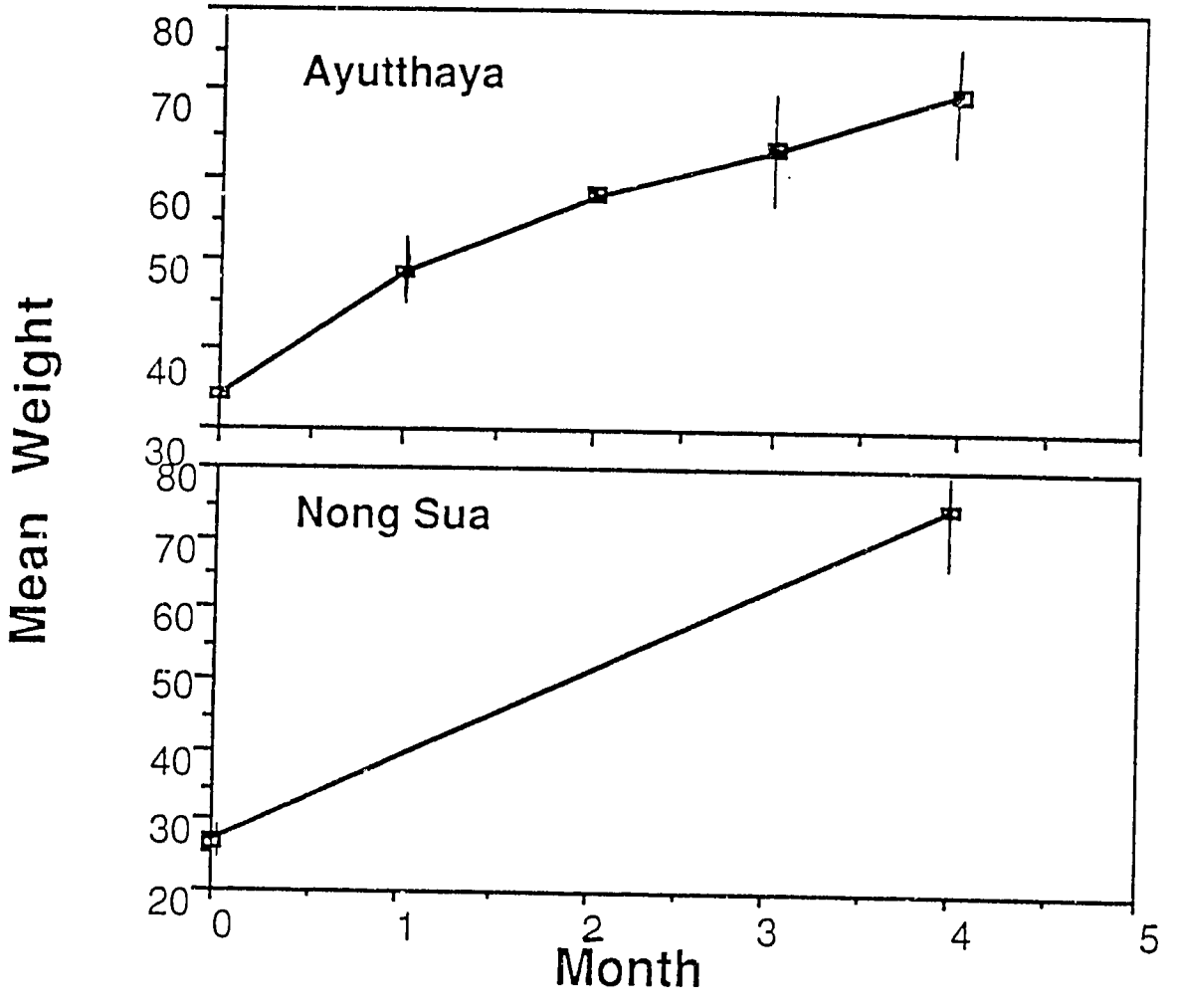


Figure 9. Mean (±SD) monthly fish weight (g) in CRSP experimental ponds.

APPENDIX. Complete set of data from Cycle I of the Pond/Dynamics Aquaculture CRSP in Thailand.

TABLE 1. Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
1	5	1983			0				
2	5	1983			0				
3	5	1983			0				
4	5	1983			0				
5	5	1983			0.6				
6	5	1983			0				
7	5	1983			0				
8	5	1983			0				
9	5	1983			0.4				
10	5	1983			0				
11	5	1983			0				
12	5	1983			0				
13	5	1983			0				
14	5	1983			0				
15	5	1983			0				
16	5	1983			0				
17	5	1983			0.8				
18	5	1983			0				
19	5	1983			0				
20	5	1983			0.4				
21	5	1983			0				
22	5	1983			0				
23	5	1983			0				
24	5	1983			0				
25	5	1983			1.6				
26	5	1983			0				
27	5	1983			1.3				
28	5	1983			0.8				
29	5	1983			2.5				
30	5	1983			0.7				
31	5	1983			0.2				
1	6	1983			1.8				
2	6	1983			1.2				
3	6	1983			0				
4	6	1983			0				
5	6	1983			0				
6	6	1983			0				
7	6	1983			3				
8	6	1983			1.1				
9	6	1983			0.7				
10	6	1983			1				
11	6	1983			0				
12	6	1983			0				
13	6	1983			0				
14	6	1983			0				
15	6	1983			0				
16	6	1983			0				
17	6	1983			0				
18	6	1983			0				
19	6	1983			0				
20	6	1983			1.5				
21	6	1983			0				
22	6	1983			5.7				
23	6	1983			0.4				
24	6	1983			0				
25	6	1983			0				
26	6	1983			0				
27	6	1983			0.5				
28	6	1983			0				
29	6	1983			0				
30	6	1983			0				
1	7	1983			0				
2	7	1983			0				
3	7	1983			0				
4	7	1983			0				
5	7	1983			0				
6	7	1983			0				
7	7	1983			0				
8	7	1983			0				
9	7	1983			0				
10	7	1983			0.6				
11	7	1983			0.3				
12	7	1983			0.4				
13	7	1983			0.3				
14	7	1983			1.6				
15	7	1983			1.9				
16	7	1983			4.5				
17	7	1983			0				
18	7	1983			0				
19	7	1983			0.2				
20	7	1983			0.2				
21	7	1983			0.1				
22	7	1983			0				
23	7	1983			0				
24	7	1983			0				
25	7	1983			0.1				
26	7	1983			0				
27	7	1983			0				
28	7	1983			4.9				
29	7	1983			0.3				
30	7	1983			0.2				
31	7	1983			0				
1	8	1983			3.5				
2	8	1983			0				
3	8	1983			2.7				
4	8	1983			8.9				
5	8	1983			0.1				
6	8	1983			0.3				

TABLE 1. Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
7	8	1983			21.8				
8	8	1983			5.2				
9	8	1983			0				
10	8	1983			2.1				
11	8	1983			0.1				
12	8	1983			1.6				
13	8	1983			0.2				
14	8	1983			0.2				
15	8	1983			2.1				
16	8	1983			0				
17	8	1983			0				
18	8	1983			2.1				
19	8	1983			14				
20	8	1983			0.7				
21	8	1983			0.5				
22	8	1983			0				
23	8	1983			0				
24	8	1983			0.2				
25	8	1983			0.8				
26	8	1983			1.1				
27	8	1983			4				
28	8	1983			0				
29	8	1983			0				
30	8	1983			0.5				
31	8	1983			0				
1	9	1983			1.1				
2	9	1983			0				
3	9	1983			0				
4	9	1983			0				
5	9	1983			0				
6	9	1983			0.3				
7	9	1983			34.6				
8	9	1983			0				
9	9	1983			0				
10	9	1983			0.2				
11	9	1983			0				
12	9	1983			0				
13	9	1983			4				
14	9	1983			3.6				
15	9	1983			0				
16	9	1983			0.4				
17	9	1983			4.2				
18	9	1983			4.6				
19	9	1983			0.2				
20	9	1983			0				
21	9	1983			1.5				
22	9	1983			0				
23	9	1983			0.6				
24	9	1983			0.1				
25	9	1983			0				
26	9	1983			0.6				
27	9	1983			4.1				
28	9	1983			0.7				
29	9	1983			2.6				
30	9	1983			0				
1	10	1983			21.2				
2	10	1983			1.2				
3	10	1983			11.2				
4	10	1983			0.9				
5	10	1983			0				
6	10	1983			0.4				
7	10	1983			0.6				
8	10	1983			0.1				
9	10	1983			1				
10	10	1983			4.3				
11	10	1983			2.2				
12	10	1983			29.2				
13	10	1983			1.6				
14	10	1983			0.3				
15	10	1983			5.9				
16	10	1983			0.1				
17	10	1983			0.8				
18	10	1983			2.1				
19	10	1983			0.8				
20	10	1983			0				
21	10	1983			1.2				
22	10	1983			0				
23	10	1983			1.2				
24	10	1983			0				
25	10	1983			1.3				
26	10	1983			0				
27	10	1983			0				
28	10	1983			0				
29	10	1983			0				
30	10	1983			0.7				
31	10	1983			0				
1	11	1983			0				
2	11	1983			0				
3	11	1983			0				
4	11	1983			0				
5	11	1983			0				
6	11	1983			0				
7	11	1983			0				
8	11	1983			0				
9	11	1983			0.5				
10	11	1983			0.5				
11	11	1983			0.7				
12	11	1983			1.1				

TABLE 1.

Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
13	11	1983			2.7				
14	11	1983			0				
15	11	1983			0				
16	11	1983			1.5				
17	11	1983			0				
18	11	1983			0				
19	11	1983			0				
20	11	1983			0				
21	11	1983			0				
22	11	1983			0				
23	11	1983			0				
24	11	1983			0				
25	11	1983			0				
26	11	1983			0				
27	11	1983			0				
28	11	1983			0				
29	11	1983			0				
30	11	1983			0				
1	12	1983			0				
2	12	1983			0				
3	12	1983			0				
4	12	1983			0				
5	12	1983			0				
6	12	1983			0				
7	12	1983			0				
8	12	1983			0				
9	12	1983			0				
10	12	1983			0				
11	12	1983			0				
12	12	1983			0				
13	12	1983			0				
14	12	1983			0				
15	12	1983			0				
16	12	1983			0				
17	12	1983			0				
18	12	1983			0				
19	12	1983			0				
20	12	1983			0				
21	12	1983			0				
22	12	1983			0				
23	12	1983			0				
24	12	1983			0				
25	12	1983			0				
26	12	1983			0				
27	12	1983			0				
28	12	1983			0				
29	12	1983			0				
30	12	1983			6				
31	12	1983			0				

TABLE 1.

Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY XX	MONTH XX	YEAR XXXX	E/m2/d XX.XX	cal/cm2/d XXXXXX	cm/d XX.X	km/hr XX	MAX. deg C XX.X	MIN. deg C XX.X	mm/d XX
1	1	1984					33	23	
2	1	1984							
3	1	1984							
4	1	1984							
5	1	1984							
6	1	1984							
7	1	1984							
8	1	1984							
9	1	1984					28	17	
10	1	1984							
11	1	1984							
12	1	1984							
13	1	1984							
14	1	1984							
15	1	1984							
16	1	1984					33	22	
17	1	1984							
18	1	1984							
19	1	1984							
20	1	1984							
21	1	1984							
22	1	1984							
23	1	1984					31	23	
24	1	1984							
25	1	1984							
26	1	1984							
27	1	1984							
28	1	1984							
29	1	1984							
30	1	1984					31	21	
31	1	1984							
1	2	1984							
2	2	1984							
3	2	1984							
4	2	1984							
5	2	1984							
6	2	1984							
7	2	1984							
8	2	1984					30	24	
9	2	1984							
10	2	1984							
11	2	1984							
12	2	1984							
13	2	1984							
14	2	1984							
15	2	1984							
16	2	1984					29	26	
17	2	1984							
18	2	1984							

TABLE 1. Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
19	2	1984							
20	2	1984							
21	2	1984							
22	2	1984							
23	2	1984							
24	2	1984							
25	2	1984							
26	2	1984							
27	2	1984					31	25	
28	2	1984							
29	2	1984							
1	3	1984							
2	3	1984							
3	3	1984							
4	3	1984							
5	3	1984					32	27	
6	3	1984							
7	3	1984							
8	3	1984							
9	3	1984							
10	3	1984							
11	3	1984							
12	3	1984							
13	3	1984							
14	3	1984							
15	3	1984							
16	3	1984							
17	3	1984							
18	3	1984							
19	3	1984							
20	3	1984							
21	3	1984							
22	3	1984							
23	3	1984							
24	3	1984							
25	3	1984							
26	3	1984							
27	3	1984							
28	3	1984							
29	3	1984							
30	3	1984							
31	3	1984							
1	4	1984							
2	4	1984							
3	4	1984							
4	4	1984							
5	4	1984							
6	4	1984							
7	4	1984							

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
8	4	1984							
9	4	1984							
10	4	1984							
11	4	1984							
12	4	1984							
13	4	1984							
14	4	1984							
15	4	1984							
16	4	1984							
17	4	1984							
18	4	1984							
19	4	1984							
20	4	1984							
21	4	1984							
22	4	1984							
23	4	1984							
24	4	1984							
25	4	1984							
26	4	1984							
27	4	1984							
28	4	1984							
29	4	1984							
30	4	1984							
1	5	1984							
2	5	1984							
3	5	1984							
4	5	1984							
5	5	1984							
6	5	1984							
7	5	1984							
8	5	1984							
9	5	1984							
10	5	1984							
11	5	1984							
12	5	1984							
13	5	1984							
14	5	1984							
15	5	1984							
16	5	1984							
17	5	1984							
18	5	1984							
19	5	1984							
20	5	1984							
21	5	1984							
22	5	1984							
23	5	1984							
24	5	1984							
25	5	1984							
26	5	1984							

TABLE 1.

Daily Weather Measurements. Nong Sua, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
27	5	1984							
28	5	1984							
29	5	1984							
30	5	1984							
31	5	1984							
1	6	1984							
2	6	1984							
3	6	1984							
4	6	1984							
5	6	1984							
6	6	1984							
7	6	1984							
8	6	1984							
9	6	1984							
10	6	1984							
11	6	1984							
12	6	1984							
13	6	1984							
14	6	1984							
15	6	1984							
16	6	1984							
17	6	1984							
18	6	1984							
19	6	1984							
20	6	1984							
21	6	1984							
22	6	1984							
23	6	1984							
24	6	1984							
25	6	1984							
26	6	1984							
27	6	1984							
28	6	1984							
29	6	1984							
30	6	1984							

TABLE 1.

Daily Weather Measurements. Ayutthaya, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY	MONTH	YEAR	E/m2/d	cal/cm2/d	cm/d	km/hr	MAX. deg C	MIN. deg C	mm/d
XX	XX	XXXX	XX.XX	XXXXXX	XX.X	XX	XX.X	XX.X	XX
8	8	1984			0.4				
9	8	1984			0.0				
10	8	1984			0.5				
11	8	1984			0.0				
12	8	1984			0.1				
13	8	1984			0.4				
14	8	1984			0.0	5			
15	8	1984	15.41		0.2	5			
16	8	1984	52.22		0.0	0			
17	8	1984	16.72		0.2	5			
18	8	1984	47.75		0.3	1			
19	8	1984	27.86		0.1	1			
20	8	1984	15.18		0.0	1	33.0	24.0	
21	8	1984	54.38		0.0	1	35.5	24.0	
22	8	1984	47.40		0.0	1	37.0	25.5	
23	8	1984	53.74		0.0	2	37.7	26.2	
24	8	1984	51.71		0.0	3			
25	8	1984	40.06		0.5		37.0	25.0	
26	8	1984	38.55		0.0	2	33.0	26.0	
27	8	1984	46.25		0.6	2	34.2	28.5	
28	8	1984	37.36		0.4	5	36.5	26.2	
29	8	1984	46.95		0.0	6	34.7	26.2	
30	8	1984	24.41		0.0	5			
1	9	1984	45.35		0.0		34.7	26.2	
2	9	1984	33.19		0.1	5	33.2	26.2	
3	9	1984	27.84		0.0	1	33.5	26.0	
4	9	1984	35.12		1.4	0	35.0	24.0	
5	9	1984	42.24		0.1	1	36.0	25.8	
6	9	1984	36.37		0.0	5			
7	9	1984	41.22		0.1		37.5	25.5	
8	9	1984	23.06		1.0	2	38.8	27.3	
9	9	1984	36.77		0.2	2	32.5	24.5	
10	9	1984	35.25		0.0	2	33.3	25.0	
11	9	1984	41.96		0.0	1			
12	9	1984	54.39		0.0		36.0	25.5	
13	9	1984	36.50		2.6	1	34.3	24.3	
14	9	1984	40.62		0.0	1			
15	9	1984	35.36		0.0				
16	9	1984	38.52		0.0		34.2	26.0	
17	9	1984	35.42		2.1				
18	9	1984			0.0		35.5	27.5	
19	9	1984			1.3		37.0	25.0	
20	9	1984			0.9	1	38.0	27.0	
21	9	1984			0.0		36.0	24.5	
22	9	1984			0.0		31.5	24.0	
23	9	1984			3.0		31.5	24.0	
24	9	1984			0.0	1	39.0	29.0	
25	9	1984			1.0		39.0	26.0	
26	9	1984			0.0	2	39.0	28.0	

TABLE 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle I

DATE			SOLAR RADIATION		RAIN	MEAN WIND	AIR TEMP		EVAPOR-ATION
DAY XX	MONTH XX	YEAR XXXX	E/m2/d XX.XX	cal/cm2/d XXXXXX	cm/d XX.X	km/hr XX	MAX. deg C XX.X	MIN. deg C XX.X	mm/d XX
27	9	1984			0.0	1	42.5	29.0	
28	9	1984			0.0	1	41.0	29.0	
29	9	1984			0.0	1	40.0	29.5	
1	10	1984	12.40		0.0	1	41.0	25.5	
2	10	1984	47.60		0.0	1	40.5	26.0	
3	10	1984			0.0	1	41.0	30.0	
4	10	1984			0.0	1	39.0	29.0	
5	10	1984	72.30		0.1	0	39.0	29.0	
6	10	1984			0.0	2	38.5	27.0	
7	10	1984			0.9	2	29.8	25.8	
8	10	1984			1.2		29.8	25.8	
9	10	1984			1.2	1	35.2	30.0	
10	10	1984			0.1	1	30.3	20.6	
11	10	1984			0.0	4	37.0	26.8	
12	10	1984			0.0	1	28.5	28.5	
13	10	1984			2.2	2	36.0	25.0	
14	10	1984	74.35		1.5	1	36.0	25.5	
15	10	1984	19.92		3.8	1	32.0	26.0	
16	10	1984	41.01		0.0	2	35.0	26.0	
17	10	1984	48.19		0.0	1	41.0	28.0	
18	10	1984	5.50		0.0	1	33.5	29.5	
19	10	1984	22.39		2.2	1	34.0	26.0	
20	10	1984	46.98		0.0	1	38.0	25.5	
22	10	1984	45.89		0.0		38.0	25.0	
23	10	1984	46.74		0.0		40.5	27.0	
24	10	1984	39.98		0.0		41.0	31.5	
25	10	1984	43.42		0.0		42.5	32.5	
26	10	1984	39.50		0.0		31.5	29.5	
27	10	1984	44.06		0.0		38.0	29.0	
28	10	1984	45.49		0.0		39.0	28.0	
29	10	1984	44.36		0.0		30.0	28.0	
30	10	1984	45.27		0.0		33.5	30.0	
31	10	1984	42.67		0.0	4	41.0	36.5	
1	11	1984	44.52		0.0	1	41.0	36.5	
2	11	1984	35.65		0.0	7	40.1	26.0	
3	11	1984	29.38		0.0	5	36.0	25.0	
4	11	1984	42.31		0.0				
5	11	1984	42.44		0.0	5	38.0	25.0	
6	11	1984	42.44		0.0	5	40.0	33.0	
7	11	1984	44.35		0.0	6	39.0	32.0	
8	11	1984	45.21		0.0	5	39.0	26.5	
9	11	1984	43.68		0.0	5	43.5	27.0	
10	11	1984	33.37		0.0	3	39.0	25.0	
11	11	1984	37.86		0.0	5	37.0	25.0	
12	11	1984	43.97		0.0	5	33.0	32.5	
13	11	1984	44.72		0.0	8	40.0	32.5	23
14	11	1984	39.17		0.0	5	40.0	32.5	18
15	11	1984	46.11		2.0	7			16
16	11	1984	42.52		8.0	5	36.0	25.0	22
17	11	1984	44.56		0.0	5	39.0	26.0	15
18	11	1984	44.24		0.0	5	39.0	26.0	10
19	11	1984	45.26		0.0	3	41.5	31.5	12
20	11	1984	43.29		0.0	3	38.0	25.0	
21	11	1984	41.85		0.0	5	39.0	25.5	
22	11	1984	42.25		0.0	5	41.0	26.0	10
23	11	1984	42.52		0.0	5	36.0	25.0	25
24	11	1984	42.88		0.0	5	36.0	25.0	15
25	11	1984	43.01		0.0	5	36.0	25.0	16
26	11	1984	41.82		0.0	5	34.5	23.5	17
27	11	1984	40.88		0.0	6	32.5	23.0	17
28	11	1984	30.49		0.0	6	33.0	24.5	2
29	11	1984	31.07		0.0	6	32.5	26.0	6
30	11	1984	31.89		0.0	6	32.0	26.0	6
1	12	1984	31.32		0.0	5	33.6	24.0	6
2	12	1984	41.50		0.0	5	35.0	24.6	6
3	12	1984	41.85		0.0	5	33.0	2.0	4
4	12	1984	39.31		0.0	6	33.0	23.0	6
5	12	1984	42.50		0.0	3	34.0	23.0	5
6	12	1984	43.33		0.0	6	38.0	28.0	6
7	12	1984	38.28		0.0	3	34.0	26.0	6
8	12	1984	41.21		0.0	3	34.0	26.0	5
9	12	1984	40.87		0.0	3	33.5	25.5	6
10	12	1984	34.64		0.0				6
11	12	1984	30.73		0.0	5	35.0	23.0	6
12	12	1984	42.53		0.0	5	37.0	24.0	3
13	12	1984	41.97		0.0	5	32.0	22.0	5
14	12	1984	38.10		0.0	3	34.0	22.0	6
15	12	1984	40.56		0.0	3	35.0	23.0	6
16	12	1984	39.64		0.0	3	35.0	24.0	6
17	12	1984	34.14		0.0	5	35.0	24.0	6
18	12	1984	30.63		0.0	5	33.0	22.0	3
19	12	1984	34.35		0.0	5	32.0	22.0	3
20	12	1984	36.97		0.0	5	36.0	24.5	5
21	12	1984	32.98		0.0	5	37.0	25.5	5
22	12	1984	26.25		0.0	5	37.0	26.5	3
23	12	1984	27.84		0.0	5	36.0	26.5	3
24	12	1984	38.57		0.0	5	32.0	25.0	3
25	12	1984	42.42		0.0	5	33.0	22.0	4
26	12	1984	42.02		0.0	5	32.0	21.0	7
27	12	1984	40.27		0.0	5	31.0	22.0	6
28	12	1984	37.69		0.0				
29	12	1984	32.86		0.0				
30	12	1984	37.54		0.0				
31	12	1984	40.43		0.0				

TABLE 2. Daily Pond Measurements. Nong Sua, Thailand, Cycle I, Dry Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
1	1	1984	1	0.9					
1	1	1984	2	0.92					
1	1	1984	3	0.95					
1	1	1984	4	0.9					
1	1	1984	5	0.89					
1	1	1984	6	0.89					
1	1	1984	7	0.91					
1	1	1984	8	0.9					
1	1	1984	9	0.92					
1	1	1984	10	0.93					
1	1	1984	11	0.95					
1	1	1984	12	0.9					
9	1	1984	1	0.88					
9	1	1984	2	0.91					
9	1	1984	3	0.93					
9	1	1984	4	0.89					
9	1	1984	5	0.87					
9	1	1984	6	0.87					
9	1	1984	7	0.9					
9	1	1984	8	0.88					
9	1	1984	9	0.9					
9	1	1984	10	0.91					
9	1	1984	11	0.93					
9	1	1984	12	0.89					
16	1	1984	1	0.87					
16	1	1984	2	0.89					
16	1	1984	3	0.92					
16	1	1984	4	0.88					
16	1	1984	5	0.85					
16	1	1984	6	0.85					
16	1	1984	7	0.88					
16	1	1984	8	0.87					
16	1	1984	9	0.88					
16	1	1984	10	0.89					
16	1	1984	11	0.91					
16	1	1984	12	0.87					
23	1	1984	1	0.85					
23	1	1984	2	0.87					
23	1	1984	3	0.89					
23	1	1984	4	0.86					
23	1	1984	5	0.83					
23	1	1984	6	0.83					
23	1	1984	7	0.86					
23	1	1984	8	0.85					
23	1	1984	9	0.85					
23	1	1984	10	0.87					
23	1	1984	11	0.88					
23	1	1984	12	0.84					
30	1	1984	1	0.9					
30	1	1984	2	0.91					
30	1	1984	3	0.93					
30	1	1984	4	0.89					
30	1	1984	5	0.9					
30	1	1984	6	0.91					
30	1	1984	7	0.9					
30	1	1984	8	0.92					
30	1	1984	9	0.91					
30	1	1984	10	0.9					
30	1	1984	11	0.89					
30	1	1984	12	0.92					
7	2	1984	1	0.89					
7	2	1984	2	0.89					
7	2	1984	3	0.91					
7	2	1984	4	0.88					
7	2	1984	5	0.88					
7	2	1984	6	0.89					
7	2	1984	7	0.88					
7	2	1984	8	0.89					
7	2	1984	9	0.89					
7	2	1984	10	0.88					
7	2	1984	11	0.87					
7	2	1984	12	0.9					
16	2	1984	1	0.87					
16	2	1984	2	0.87					
16	2	1984	3	0.89					
16	2	1984	4	0.87					
16	2	1984	5	0.87					
16	2	1984	6	0.87					
16	2	1984	7	0.86					
16	2	1984	8	0.87					
16	2	1984	9	0.86					
16	2	1984	10	0.86					
16	2	1984	11	0.85					
16	2	1984	12	0.88					
27	2	1984	1	0.85					
27	2	1984	2	0.84					
27	2	1984	3	0.87					
27	2	1984	4	0.85					
27	2	1984	5	0.85					
27	2	1984	6	0.84					
27	2	1984	7	0.84					
27	2	1984	8	0.85					
27	2	1984	9	0.84					
27	2	1984	10	0.84					
27	2	1984	11	0.83					
27	2	1984	12	0.86					
5	3	1984	1	0.9					
5	3	1984	2	0.91					

TABLE 2.

Daily Pond Measurements. Nong Sua, Thailand, Cycle I, Dry Season

DATE			POND	POND DEPTH m	WATER INFLOW?	POND OVER-FLOW?	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt
DAY XX	MONTH XX	YEAR XXXX		X.XX	Y or N	Y or N			XX
5	3	1984	3	0.9					
5	3	1984	4	0.89					
5	3	1984	5	0.91					
5	3	1984	6	0.92					
5	3	1984	7	0.91					
5	3	1984	8	0.9					
5	3	1984	9	0.9					
5	3	1984	10	0.92					
5	3	1984	11	0.91					
5	3	1984	12	0.9					

TABLE 2.

Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	POND DEPTH m	WATER INFLOW?	POND OVER-FLOW?	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt
DAY XX	MONTH XX	YEAR XXXX		X.XX	Y or N	Y or N			XX
4	8	1984	1	0.74					
4	8	1984	2	0.89					
4	8	1984	3	0.84					
4	8	1984	4	0.91					
4	8	1984	5	0.88					
4	8	1984	6	0.83					
4	8	1984	7	0.92					
4	8	1984	8	0.96					
4	8	1984	9	0.82					
4	8	1984	10	0.85					
4	8	1984	11	0.92					
4	8	1984	12	0.82					
6	8	1984	1	0.70					
6	8	1984	2	0.88					
6	8	1984	3	0.80					
6	8	1984	4	0.89					
6	8	1984	5	0.88					
6	8	1984	6	0.80					
6	8	1984	7	0.90					
6	8	1984	8	0.95					
6	8	1984	9	0.77					
6	8	1984	10	0.92					
6	8	1984	11	0.90					
6	8	1984	12	0.80					
8	8	1984	1	0.69					
8	8	1984	2	0.88					
8	8	1984	3	0.78					
8	8	1984	4	0.88					
8	8	1984	5	0.87					
8	8	1984	6	0.75					
8	8	1984	7	0.91					
8	8	1984	8	0.95					
8	8	1984	9	0.72					
8	8	1984	10	0.79					
8	8	1984	11	0.90					
8	8	1984	12	0.74					
10	8	1984	1	0.67					
10	8	1984	2	0.88					
10	8	1984	3	0.77					
10	8	1984	4	0.87					
10	8	1984	5	0.87					
10	8	1984	6	0.73					
10	8	1984	7	0.90					
10	8	1984	8	0.95					
10	8	1984	9	0.71					
10	8	1984	10	0.78					
10	8	1984	11	0.90					
10	8	1984	12	0.72					
13	8	1984	1	0.64					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
DAY XX	MONTH XX	YEAR XXXX							
13	8	1984	2	0.87					
13	8	1984	3	0.71					
13	8	1984	4	0.85					
13	8	1984	5	0.87					
13	8	1984	6	0.67					
13	8	1984	7	0.90					
13	8	1984	8	0.94					
13	8	1984	9	0.67					
13	8	1984	10	0.75					
13	8	1984	11	0.90					
13	8	1984	12	0.68					
14	8	1984	1	0.66					
14	8	1984	2	0.87					
14	8	1984	3	0.72					
14	8	1984	4	0.85					
14	8	1984	5	0.87					
14	8	1984	6	0.65					
14	8	1984	7	0.90					
14	8	1984	8	0.95					
14	8	1984	9	0.67					
14	8	1984	10	0.75					
14	8	1984	11	0.90					
14	8	1984	12	0.67					
15	8	1984	1	0.66					
15	8	1984	2	0.88					
15	8	1984	3	0.70					
15	8	1984	4	0.84					
15	8	1984	5	0.87					
15	8	1984	6	0.66					
15	8	1984	7	0.90					
15	8	1984	8	0.94					
15	8	1984	9	0.66					
15	8	1984	10	0.75					
15	8	1984	11	0.90					
15	8	1984	12	0.66					
16	8	1984	1	0.67					
16	8	1984	2	0.87					
16	8	1984	3	0.69					
16	8	1984	4	0.83					
16	8	1984	5	0.86					
16	8	1984	6	0.65					
16	8	1984	7	0.90					
16	8	1984	8	0.95					
16	8	1984	9	0.65					
16	8	1984	10	0.75					
16	8	1984	11	0.90					
16	8	1984	12	0.64					
17	8	1984	1	0.66					
17	8	1984	2	0.88					
17	8	1984	3	0.69					
17	8	1984	4	0.82					
17	8	1984	5	0.87					
17	8	1984	6	0.65					
17	8	1984	7	0.90					
17	8	1984	8	0.95					
17	8	1984	9	0.65					
17	8	1984	10	0.75					
17	8	1984	11	0.90					
17	8	1984	12	0.64					
18	8	1984	1	0.66					
18	8	1984	2	0.88					
18	8	1984	3	0.67					
18	8	1984	4	0.81					
18	8	1984	5	0.87					
18	8	1984	6	0.65					
18	8	1984	7	0.90					
18	8	1984	8	0.96					
18	8	1984	9	0.64					
18	8	1984	10	0.75					
18	8	1984	11	0.90					
18	8	1984	12	0.64					
19	8	1984	1	0.66					
19	8	1984	2	0.88					
19	8	1984	3	0.67					
19	8	1984	4	0.87					
19	8	1984	5	0.88					
19	8	1984	6	0.65					
19	8	1984	7	0.90					
19	8	1984	8	0.96					
19	8	1984	9	0.62					
19	8	1984	10	0.75					
19	8	1984	11	0.90					
19	8	1984	12	0.63					
20	8	1984	1	0.66					
20	8	1984	2	0.88					
20	8	1984	3	0.67					
20	8	1984	4	0.80					
20	8	1984	5	0.88					
20	8	1984	6	0.64					
20	8	1984	7	0.90					
20	8	1984	8	0.96					
20	8	1984	9	0.60					
20	8	1984	10	0.75					
20	8	1984	11	0.90					
20	8	1984	12	0.61					
21	8	1984	1	0.65					
21	8	1984	2	0.88					
21	8	1984	3	0.65					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
21	8	1984	4	0.81					
21	8	1984	5	0.86					
21	8	1984	6	0.64					
21	8	1984	7	0.90					
21	8	1984	8	0.95					
21	8	1984	9	0.61					
21	8	1984	10	0.75					
21	8	1984	11	0.89					
21	8	1984	12	0.62					
22	8	1984	1	0.64					
22	8	1984	2	0.85					
22	8	1984	3	0.64					
22	8	1984	4	0.78					
22	8	1984	5	0.86					
22	8	1984	6	0.62					
22	8	1984	7	0.90					
22	8	1984	8	0.94					
22	8	1984	9	0.60					
22	8	1984	10	0.73					
22	8	1984	11	0.89					
22	8	1984	12	0.61					
23	8	1984	1	0.62					
23	8	1984	2	0.84					
23	8	1984	3	0.63					
23	8	1984	4	0.77					
23	8	1984	5	0.84					
23	8	1984	6	0.62					
23	8	1984	7	0.88					
23	8	1984	8	0.93					
23	8	1984	9	0.59					
23	8	1984	10	0.72					
23	8	1984	11	0.88					
23	8	1984	12	0.60					
24	8	1984	1	0.61					
24	8	1984	2	0.83					
24	8	1984	3	0.61					
24	8	1984	4	0.77					
24	8	1984	5	0.84					
24	8	1984	6	0.61					
24	8	1984	7	0.87					
24	8	1984	8	0.91					
24	8	1984	9	0.58					
24	8	1984	10	0.71					
24	8	1984	11	0.88					
24	8	1984	12	0.59					
26	8	1984	1	0.59					
26	8	1984	2	0.81					
26	8	1984	3	0.61					
26	8	1984	4	0.72					
26	8	1984	5	0.82					
26	8	1984	6	0.59					
26	8	1984	7	0.86					
26	8	1984	8	0.90					
26	8	1984	9	0.56					
26	8	1984	10	0.69					
26	8	1984	11	0.84					
26	8	1984	12	0.57					
27	8	1984	1	0.59					
27	8	1984	2	0.81					
27	8	1984	3	0.61					
27	8	1984	4	0.72					
27	8	1984	5	0.82					
27	8	1984	6	0.59					
27	8	1984	7	0.86					
27	8	1984	8	0.90					
27	8	1984	9	0.56					
27	8	1984	10	0.69					
27	8	1984	11	0.84					
27	8	1984	12	0.57					
28	8	1984	1	0.59					
28	8	1984	2	0.81					
28	8	1984	3	0.58					
28	8	1984	4	0.74					
28	8	1984	5	0.82					
28	8	1984	6	0.59					
28	8	1984	7	0.89					
28	8	1984	8	0.90					
28	8	1984	9	0.56					
28	8	1984	10	0.69					
28	8	1984	11	0.84					
28	8	1984	12	0.57					
29	8	1984	1	0.77					
29	8	1984	2	0.90					
29	8	1984	3	0.88					
29	8	1984	4	0.90					
29	8	1984	5	0.90					
29	8	1984	6	0.88					
29	8	1984	7	0.90					
29	8	1984	8	0.90					
29	8	1984	9	0.88					
29	8	1984	10	0.88					
29	8	1984	11	0.90					
29	8	1984	12	0.87					
30	8	1984	1	0.70					
30	8	1984	2	0.89					
30	8	1984	3	0.86					
30	8	1984	4	0.86					
30	8	1984	5	0.88					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
30	3	1984	6	0.88					
30	3	1984	7	0.89					
30	3	1984	8	0.89					
30	8	1984	9	0.87					
30	8	1984	10	0.85					
30	3	1984	11	0.88					
30	9	1984	12	0.84					
2	9	1984	1	1.04					
2	9	1984	2	0.88					
2	9	1984	3	0.80					
2	9	1984	4	0.87					
2	9	1984	5	0.85					
2	9	1984	6	0.79					
2	9	1984	7	0.87					
2	9	1984	8	0.87					
2	9	1984	9	0.82					
2	9	1984	10	0.78					
2	9	1984	11	0.84					
2	9	1984	12	0.77					
3	9	1984	1	0.81					
3	9	1984	2	0.88					
3	9	1984	3	0.79					
3	9	1984	4	0.86					
3	9	1984	5	0.85					
3	9	1984	6	0.77					
3	9	1984	7	0.87					
3	9	1984	8	0.87					
3	9	1984	9	0.81					
3	9	1984	10	0.77					
3	9	1984	11	0.83					
3	9	1984	12	0.76					
4	9	1984	1	0.78					
4	9	1984	2	0.85					
4	9	1984	3	0.77					
4	9	1984	4	0.86					
4	9	1984	5	0.84					
4	9	1984	6	0.76					
4	9	1984	7	0.87					
4	9	1984	8	0.86					
4	9	1984	9	0.80					
4	9	1984	10	0.76					
4	9	1984	11	0.83					
4	9	1984	12	0.74					
5	9	1984	1	0.74					
5	9	1984	2	0.86					
5	9	1984	3	0.78					
5	9	1984	4	0.87					
5	9	1984	5	0.65					
5	9	1984	6	0.76					
5	9	1984	7	0.88					
5	9	1984	8	0.88					
5	9	1984	9	0.80					
5	9	1984	10	0.76					
5	9	1984	11	0.84					
5	9	1984	12	0.74					
6	9	1984	1	0.72					
6	9	1984	2	0.85					
6	9	1984	3	0.76					
6	9	1984	4	0.86					
6	9	1984	5	0.84					
6	9	1984	6	0.75					
6	9	1984	7	0.87					
6	9	1984	8	0.87					
6	9	1984	9	0.78					
6	9	1984	10	0.75					
6	9	1984	11	0.83					
6	9	1984	12	0.72					
8	9	1984	1	0.73					
8	9	1984	2	0.84					
8	9	1984	3	0.73					
8	9	1984	4	0.84					
8	9	1984	5	0.83					
8	9	1984	6	0.72					
8	9	1984	7	0.86					
8	9	1984	8	0.86					
8	9	1984	9	0.76					
8	9	1984	10	0.73					
8	9	1984	11	0.82					
8	9	1984	12	0.69					
9	9	1984	1	0.73					
9	9	1984	2	0.83					
9	9	1984	3	0.73					
9	9	1984	4	0.84					
9	9	1984	5	0.83					
9	9	1984	6	0.72					
9	9	1984	7	0.86					
9	9	1984	8	0.86					
9	9	1984	9	0.75					
9	9	1984	10	0.72					
9	9	1984	11	0.82					
9	9	1984	12	0.69					
10	9	1984	1	0.68					
10	9	1984	2	0.89					
10	9	1984	3	0.72					
10	9	1984	4	0.85					
10	9	1984	5	0.83					
10	9	1984	6	0.69					
10	9	1984	7	0.86					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
10	9	1984	8	0.87					
10	9	1984	9	0.75					
10	9	1984	10	0.72					
10	9	1984	11	0.83					
10	9	1984	12	0.68					
11	9	1984	1	0.66					
11	9	1984	2	0.83					
11	9	1984	3	0.71					
11	9	1984	4	0.84					
11	9	1984	5	0.82					
11	9	1984	6	0.71					
11	9	1984	7	0.84					
11	9	1984	8	0.86					
11	9	1984	9	0.74					
11	9	1984	10	0.72					
11	9	1984	11	0.83					
11	9	1984	12	0.70					
13	9	1984	1	0.73					
13	9	1984	2	0.88					
13	9	1984	3	0.87					
13	9	1984	4	0.88					
13	9	1984	5	0.89					
13	9	1984	6	0.86					
13	9	1984	7	0.89					
13	9	1984	8	0.89					
13	9	1984	9	0.87					
13	9	1984	10	0.86					
13	9	1984	11	0.87					
13	9	1984	12	0.86					
14	9	1984	1	0.72					
14	9	1984	2	0.90					
14	9	1984	3	0.88					
14	9	1984	4	0.91					
14	9	1984	5	0.92					
14	9	1984	6	0.88					
14	9	1984	7	0.92					
14	9	1984	8	0.92					
14	9	1984	9	0.89					
14	9	1984	10	0.88					
14	9	1984	11	0.89					
14	9	1984	12	0.86					
17	9	1984	1	0.69					
17	9	1984	2	0.90					
17	9	1984	3	0.86					
17	9	1984	4	0.90					
17	9	1984	5	0.90					
17	9	1984	6	0.85					
17	9	1984	7	0.92					
17	9	1984	8	0.92					
17	9	1984	9	0.87					
17	9	1984	10	0.84					
17	9	1984	11	0.89					
17	9	1984	12	0.82					
18	9	1984	1	0.70					
18	9	1984	2	0.92					
18	9	1984	3	0.87					
18	9	1984	4	0.93					
18	9	1984	5	0.92					
18	9	1984	6	0.87					
18	9	1984	7	0.95					
18	9	1984	8	0.94					
18	9	1984	9	0.88					
18	9	1984	10	0.86					
18	9	1984	11	0.90					
18	9	1984	12	0.82					
19	9	1984	1	0.69					
19	9	1984	2	0.92					
19	9	1984	3	0.85					
19	9	1984	4	0.92					
19	9	1984	5	0.92					
19	9	1984	6	0.86					
19	9	1984	7	0.95					
19	9	1984	8	0.94					
19	9	1984	9	0.87					
19	9	1984	10	0.84					
19	9	1984	11	0.90					
19	9	1984	12	0.81					
20	9	1984	1	0.70					
20	9	1984	2	0.93					
20	9	1984	3	0.86					
20	9	1984	4	0.91					
20	9	1984	5	0.95					
20	9	1984	6	0.86					
20	9	1984	7	0.96					
20	9	1984	8	0.95					
20	9	1984	9	0.88					
20	9	1984	10	0.85					
20	9	1984	11	0.90					
20	9	1984	12	0.80					
21	9	1984	1	0.69					
21	9	1984	2	0.92					
21	9	1984	3	0.86					
21	9	1984	4	0.93					
21	9	1984	5	0.93					
21	9	1984	6	0.86					
21	9	1984	7	0.96					
21	9	1984	8	0.96					
21	9	1984	9	0.87					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
21	9	1984	10	0.84					
21	9	1984	11	0.90					
21	9	1984	12	0.79					
22	9	1984	1	0.68					
22	9	1984	2	0.92					
22	9	1984	3	0.85					
22	9	1984	4	0.92					
22	9	1984	5	0.93					
22	9	1984	6	0.86					
22	9	1984	7	0.96					
22	9	1984	8	0.96					
22	9	1984	9	0.87					
22	9	1984	10	0.85					
22	9	1984	11	0.90					
22	9	1984	12	0.79					
23	9	1984	1	0.70					
23	9	1984	2	0.96					
23	9	1984	3	0.88					
23	9	1984	4	0.96					
23	9	1984	5	0.96					
23	9	1984	6	0.88					
23	9	1984	7	1.00					
23	9	1984	8	0.99					
23	9	1984	9	0.89					
23	9	1984	10	0.88					
23	9	1984	11	0.90					
23	9	1984	12	0.80					
24	9	1984	1	0.70					
24	9	1984	2	0.96					
[illegible]	9	1984	3	0.86					
24	9	1984	4	0.95					
24	9	1984	5	0.96					
24	9	1984	6	0.88					
24	9	1984	7	1.00					
24	9	1984	8	0.98					
24	9	1984	9	0.88					
24	9	1984	10	0.86					
24	9	1984	11	0.88					
24	9	1984	12	0.79					
25	9	1984	1	0.71					
25	9	1984	2	0.96					
25	9	1984	3	0.88					
25	9	1984	4	0.96					
25	9	1984	5	0.96					
25	9	1984	6	0.88					
25	9	1984	7	1.01					
25	9	1984	8	0.99					
25	9	1984	9	0.88					
25	9	1984	10	0.86					
25	9	1984	11	0.88					
25	9	1984	12	0.78					
26	9	1984	1	0.70					
26	9	1984	2	0.96					
26	9	1984	3	0.85					
26	9	1984	4	0.94					
26	9	1984	5	0.96					
26	9	1984	6	0.85					
26	9	1984	7	1.00					
26	9	1984	8	0.98					
26	9	1984	9	0.87					
26	9	1984	10	0.85					
26	9	1984	11	0.86					
26	9	1984	12	0.76					
27	9	1984	1	0.70					
27	9	1984	2	0.94					
27	9	1984	3	0.86					
27	9	1984	4	0.94					
27	9	1984	5	0.95					
27	9	1984	6	0.86					
27	9	1984	7	1.00					
27	9	1984	8	0.99					
27	9	1984	9	0.87					
27	9	1984	10	0.84					
27	9	1984	11	0.85					
27	9	1984	12	0.76					
28	9	1984	1	0.84					
28	9	1984	2	0.94					
28	9	1984	3	0.88					
28	9	1984	4	0.93					
28	9	1984	5	0.94					
28	9	1984	6	0.90					
28	9	1984	7	1.00					
28	9	1984	8	0.98					
28	9	1984	9	0.90					
28	9	1984	10	0.90					
28	9	1984	11	0.90					
28	9	1984	12	0.88					
29	9	1984	1	0.77					
29	9	1984	2	0.93					
29	9	1984	3	0.88					
29	9	1984	4	0.93					
29	9	1984	5	0.94					
29	9	1984	6	0.88					
29	9	1984	7	1.00					
29	9	1984	8	0.98					
29	9	1984	9	0.90					
29	9	1984	10	0.88					
29	9	1984	11	0.90					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
29	9	1984	12	0.88					
1	10	1984	1	0.70					
1	10	1984	2	0.92					
1	10	1984	3	0.86					
1	10	1984	4	0.90					
1	10	1984	5	0.92					
1	10	1984	6	0.88					
1	10	1984	7	0.99					
1	10	1984	8	0.97					
1	10	1984	9	0.88					
1	10	1984	10	0.87					
1	10	1984	11	0.80					
1	10	1984	12	0.82					
2	10	1984	1	0.70					
2	10	1984	2	0.92					
2	10	1984	3	0.86					
2	10	1984	4	0.90					
2	10	1984	5	0.92					
2	10	1984	6	0.86					
2	10	1984	7	0.99					
2	10	1984	8	0.97					
2	10	1984	9	0.84					
2	10	1984	10	0.86					
2	10	1984	11	0.86					
2	10	1984	12	0.80					
3	10	1984	1	0.86					
3	10	1984	2	0.90					
3	10	1984	3	0.83					
3	10	1984	4	0.92					
3	10	1984	5	0.96					
3	10	1984	6	0.87					
3	10	1984	7	1.00					
3	10	1984	8	0.96					
3	10	1984	9	0.90					
3	10	1984	10	0.84					
3	10	1984	11	0.84					
3	10	1984	12	0.80					
4	10	1984	1	0.84					
4	10	1984	2	0.90					
4	10	1984	3	0.73					
4	10	1984	4	0.91					
4	10	1984	5	0.95					
4	10	1984	6	0.87					
4	10	1984	7	1.00					
4	10	1984	8	0.96					
4	10	1984	9	0.89					
4	10	1984	10	0.83					
4	10	1984	11	0.83					
4	10	1984	12	0.79					
5	10	1984	1	0.70					
5	10	1984	2	0.93					
5	10	1984	3	0.86					
5	10	1984	4	0.90					
5	10	1984	5	0.94					
5	10	1984	6	0.86					
5	10	1984	7	1.00					
5	10	1984	8	0.96					
5	10	1984	9	0.83					
5	10	1984	10	0.84					
5	10	1984	11	0.89					
5	10	1984	12	0.78					
6	10	1984	1	0.70					
6	10	1984	2	0.93					
6	10	1984	3	0.85					
6	10	1984	4	0.90					
6	10	1984	5	0.94					
6	10	1984	6	0.86					
6	10	1984	7	1.00					
6	10	1984	8	0.96					
6	10	1984	9	0.83					
6	10	1984	10	0.84					
6	10	1984	11	0.85					
6	10	1984	12	0.77					
7	10	1984	1	0.70					
7	10	1984	2	0.92					
7	10	1984	3	0.83					
7	10	1984	4	0.90					
7	10	1984	5	0.94					
7	10	1984	6	0.85					
7	10	1984	7	1.00					
7	10	1984	8	0.97					
7	10	1984	9	0.87					
7	10	1984	10	0.84					
7	10	1984	11	0.84					
7	10	1984	12	0.76					
8	10	1984	1	0.70					
8	10	1984	2	0.92					
8	10	1984	3	0.83					
8	10	1984	4	0.90					
8	10	1984	5	0.94					
8	10	1984	6	0.86					
8	10	1984	7	1.00					
8	10	1984	8	0.98					
8	10	1984	9	0.86					
8	10	1984	10	0.84					
8	10	1984	11	0.84					
8	10	1984	12	0.76					
9	10	1984	1	0.70					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
9	10	1984	2	0.92					
9	10	1984	3	0.82					
9	10	1984	4	0.90					
9	10	1984	5	0.92					
9	10	1984	6	0.85					
9	10	1984	7	1.00					
9	10	1984	8	0.98					
9	10	1984	9	0.86					
9	10	1984	10	0.84					
9	10	1984	11	0.82					
9	10	1984	12	0.75					
10	10	1984	1	0.70					
10	10	1984	2	0.94					
10	10	1984	3	0.82					
10	10	1984	4	0.92					
10	10	1984	5	0.95					
10	10	1984	6	0.86					
10	10	1984	7	1.00					
10	10	1984	8	0.98					
10	10	1984	9	0.86					
10	10	1984	10	0.85					
10	10	1984	11	0.82					
10	10	1984	12	0.76					
11	10	1984	1	0.72					
11	10	1984	2	0.93					
11	10	1984	3	0.82					
11	10	1984	4	0.91					
11	10	1984	5	0.95					
11	10	1984	6	0.86					
11	10	1984	7	1.00					
11	10	1984	8	0.98					
11	10	1984	9	0.86					
11	10	1984	10	0.84					
11	10	1984	11	0.82					
11	10	1984	12	0.75					
12	10	1984	1	0.70					
12	10	1984	2	0.90					
12	10	1984	3	0.81					
12	10	1984	4	0.88					
12	10	1984	5	0.92					
12	10	1984	6	0.85					
12	10	1984	7	0.99					
12	10	1984	8	0.95					
12	10	1984	9	0.86					
12	10	1984	10	0.84					
12	10	1984	11	0.82					
12	10	1984	12	0.72					
13	10	1984	1	0.74					
13	10	1984	2	0.94					
13	10	1984	3	0.82					
13	10	1984	4	0.91					
13	10	1984	5	0.96					
13	10	1984	6	0.86					
13	10	1984	7	1.04					
13	10	1984	8	0.99					
13	10	1984	9	0.86					
13	10	1984	10	0.86					
13	10	1984	11	0.86					
13	10	1984	12	0.76					
14	10	1984	1	0.75					
14	10	1984	2	0.96					
14	10	1984	3	0.89					
14	10	1984	4	0.94					
14	10	1984	5	0.98					
14	10	1984	6	0.88					
14	10	1984	7	1.05					
14	10	1984	8	1.00					
14	10	1984	9	0.88					
14	10	1984	10	0.89					
14	10	1984	11	0.90					
14	10	1984	12	0.79					
15	10	1984	1	0.77					
15	10	1984	2	0.95					
15	10	1984	3	0.85					
15	10	1984	4	0.95					
15	10	1984	5	0.97					
15	10	1984	6	0.88					
15	10	1984	7	1.05					
15	10	1984	8	0.98					
15	10	1984	9	0.87					
15	10	1984	10	0.88					
15	10	1984	11	0.95					
15	10	1984	12	0.79					
16	10	1984	1	0.83					
16	10	1984	2	1.02					
16	10	1984	3	0.90					
16	10	1984	4	1.00					
16	10	1984	5	1.02					
16	10	1984	6	0.93					
16	10	1984	7	1.11					
16	10	1984	8	1.07					
16	10	1984	9	0.90					
16	10	1984	10	0.94					
16	10	1984	11	1.01					
16	10	1984	12	0.83					
17	10	1984	1	0.82					
17	10	1984	2	1.01					
17	10	1984	3	0.88					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
17	10	1984	4	1.00					
17	10	1984	5	1.01					
17	10	1984	6	0.92					
17	10	1984	7	1.11					
17	10	1984	8	1.08					
17	10	1984	9	0.92					
17	10	1984	10	0.94					
17	10	1984	11	1.09					
17	10	1984	12	0.89					
18	10	1984	1	0.81					
18	10	1984	2	1.01					
18	10	1984	3	0.88					
18	10	1984	4	0.99					
18	10	1984	5	1.01					
18	10	1984	6	0.92					
18	10	1984	7	1.10					
18	10	1984	8	1.08					
18	10	1984	9	0.91					
18	10	1984	10	0.93					
18	10	1984	11	1.08					
18	10	1984	12	0.88					
19	10	1984	1	0.83					
19	10	1984	2	1.04					
19	10	1984	3	9.00					
19	10	1984	4	1.00					
19	10	1984	5	1.12					
19	10	1984	6	1.04					
19	10	1984	7	1.12					
19	10	1984	8	1.09					
19	10	1984	9	92.00					
19	10	1984	10	0.99					
19	10	1984	11	1.13					
19	10	1984	12	0.90					
20	10	1984	1	0.83					
20	10	1984	2	1.04					
20	10	1984	3	0.90					
20	10	1984	4	1.00					
20	10	1984	5	1.02					
20	10	1984	6	1.04					
20	10	1984	7	1.12					
20	10	1984	8	1.09					
20	10	1984	9	0.92					
20	10	1984	10	0.99					
20	10	1984	11	1.13					
20	10	1984	12	0.90					
22	10	1984	1	0.80					
22	10	1984	2	1.01					
22	10	1984	3	0.88					
22	10	1984	4	1.00					
22	10	1984	5	0.92					
22	10	1984	6	0.92					
22	10	1984	7	1.12					
22	10	1984	8	1.10					
22	10	1984	9	0.90					
22	10	1984	10	1.04					
22	10	1984	11	1.04					
22	10	1984	12	0.90					
23	10	1984	1	0.80					
23	10	1984	2	1.01					
23	10	1984	3	0.88					
23	10	1984	4	0.99					
23	10	1984	5	1.01					
23	10	1984	6	1.01					
23	10	1984	7	1.11					
23	10	1984	8	1.10					
23	10	1984	9	0.91					
23	10	1984	10	1.03					
23	10	1984	11	1.09					
23	10	1984	12	0.89					
24	10	1984	1	0.80					
24	10	1984	2	1.02					
24	10	1984	3	0.85					
24	10	1984	4	0.98					
24	10	1984	5	1.02					
24	10	1984	6	0.90					
24	10	1984	7	1.10					
24	10	1984	8	1.08					
24	10	1984	9	0.88					
24	10	1984	10	1.00					
24	10	1984	11	1.10					
24	10	1984	12	0.88					
25	10	1984	1	0.80					
25	10	1984	2	1.01					
25	10	1984	3	0.84					
25	10	1984	4	0.98					
25	10	1984	5	1.00					
25	10	1984	6	0.89					
25	10	1984	7	1.10					
25	10	1984	8	1.08					
25	10	1984	9	0.88					
25	10	1984	10	1.00					
25	10	1984	11	1.08					
25	10	1984	12	0.88					
26	10	1984	1	0.80					
26	10	1984	2	1.00					
26	10	1984	3	0.84					
26	10	1984	4	0.97					
26	10	1984	5	1.00					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
26	10	1984	6	0.83					
26	10	1984	7	1.10					
26	10	1984	8	1.03					
26	10	1984	9	0.87					
26	10	1984	10	0.98					
26	10	1984	11	1.08					
26	10	1984	12	0.83					
27	10	1984	1	0.79					
27	10	1984	2	1.00					
27	10	1984	3	0.84					
27	10	1984	4	0.96					
27	10	1984	5	1.00					
27	10	1984	6	0.88					
27	10	1984	7	1.09					
27	10	1984	8	1.08					
27	10	1984	9	0.87					
27	10	1984	10	0.96					
27	10	1984	11	1.08					
27	10	1984	12	0.87					
28	10	1984	1	0.79					
28	10	1984	2	1.00					
28	10	1984	3	0.84					
28	10	1984	4	0.96					
28	10	1984	5	1.00					
28	10	1984	6	0.87					
28	10	1984	7	1.08					
28	10	1984	8	1.07					
28	10	1984	9	0.87					
28	10	1984	10	0.96					
28	10	1984	11	1.07					
28	10	1984	12	0.87					
29	10	1984	1	0.78					
29	10	1984	2	0.99					
29	10	1984	3	0.81					
29	10	1984	4	0.96					
29	10	1984	5	1.00					
29	10	1984	6	0.85					
29	10	1984	7	1.08					
29	10	1984	8	1.07					
29	10	1984	9	0.86					
29	10	1984	10	0.94					
29	10	1984	11	1.06					
29	10	1984	12	0.86					
30	10	1984	1	0.77					
30	10	1984	2	0.96					
30	10	1984	3	0.80					
30	10	1984	4	0.94					
30	10	1984	5	0.97					
30	10	1984	6	0.84					
30	10	1984	7	1.06					
30	10	1984	8	1.05					
30	10	1984	9	0.82					
30	10	1984	10	0.93					
30	10	1984	11	1.05					
30	10	1984	12	0.84					
31	10	1984	1	0.76					
31	10	1984	2	0.96					
31	10	1984	3	0.79					
31	10	1984	4	0.93					
31	10	1984	5	0.97					
31	10	1984	6	0.83					
31	10	1984	7	1.06					
31	10	1984	8	1.05					
31	10	1984	9	0.81					
31	10	1984	10	0.91					
31	10	1984	11	1.04					
31	10	1984	12	0.88					
1	11	1984	1	0.76					
1	11	1984	2	0.96					
1	11	1984	3	0.79					
1	11	1984	4	0.93					
1	11	1984	5	0.97					
1	11	1984	6	0.83					
1	11	1984	7	1.06					
1	11	1984	8	1.05					
1	11	1984	9	0.81					
1	11	1984	10	0.91					
1	11	1984	11	1.04					
1	11	1984	12	0.88					
2	11	1984	1	0.76					
2	11	1984	2	0.96					
2	11	1984	3	0.78					
2	11	1984	4	0.92					
2	11	1984	5	0.97					
2	11	1984	6	0.82					
2	11	1984	7	1.06					
2	11	1984	8	1.05					
2	11	1984	9	0.80					
2	11	1984	10	0.88					
2	11	1984	11	1.04					
2	11	1984	12	0.81					
3	11	1984	1	0.75					
3	11	1984	2	0.96					
3	11	1984	3	0.77					
3	11	1984	4	0.92					
3	11	1984	5	0.97					
3	11	1984	6	0.82					
3	11	1984	7	1.05					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	DATE MONTH XX	DATE YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
3	11	1984	8	1.05					
3	11	1984	9	0.80					
3	11	1984	10	0.89					
3	11	1984	11	1.04					
3	11	1984	12	0.80					
4	11	1984	1						
4	11	1984	2						
4	11	1984	3						
4	11	1984	4						
4	11	1984	5	0.96					
4	11	1984	6						
4	11	1984	7						
4	11	1984	8						
4	11	1984	9						
4	11	1984	10						
4	11	1984	11						
4	11	1984	12						
5	11	1984	1	0.75					
5	11	1984	2	0.94					
5	11	1984	3	0.75					
5	11	1984	4	0.91					
5	11	1984	5	0.96					
5	11	1984	6	0.79					
5	11	1984	7	1.02					
5	11	1984	8	1.02					
5	11	1984	9	0.78					
5	11	1984	10	0.86					
5	11	1984	11	0.99					
5	11	1984	12	0.78					
6	11	1984	1	0.75					
6	11	1984	2	0.94					
6	11	1984	3	0.72					
6	11	1984	4	0.90					
6	11	1984	5	0.96					
6	11	1984	6	0.79					
6	11	1984	7	1.02					
6	11	1984	8	1.00					
6	11	1984	9	0.78					
6	11	1984	10	0.85					
6	11	1984	11	0.99					
6	11	1984	12	0.78					
7	11	1984	1	0.74					
7	11	1984	2	0.90					
7	11	1984	3	0.72					
7	11	1984	4	0.88					
7	11	1984	5	0.94					
7	11	1984	6	0.77					
7	11	1984	7	1.01					
7	11	1984	8	0.98					
7	11	1984	9	0.77					
7	11	1984	10	0.85					
7	11	1984	11	0.98					
7	11	1984	12	0.78					
8	11	1984	1	0.74					
8	11	1984	2	0.92					
8	11	1984	3	0.72					
8	11	1984	4	0.88					
8	11	1984	5	0.94					
8	11	1984	6	0.78					
8	11	1984	7	1.00					
8	11	1984	8	1.02					
8	11	1984	9	0.80					
8	11	1984	10	0.84					
8	11	1984	11	0.98					
8	11	1984	12	0.78					
9	11	1984	1	0.74					
9	11	1984	2	0.92					
9	11	1984	3	0.72					
9	11	1984	4	0.88					
9	11	1984	5	0.92					
9	11	1984	6	0.76					
9	11	1984	7	1.00					
9	11	1984	8	1.01					
9	11	1984	9	0.78					
9	11	1984	10	0.84					
9	11	1984	11	0.97					
9	11	1984	12	0.78					
10	11	1984	1	0.74					
10	11	1984	2	0.92					
10	11	1984	3	0.72					
10	11	1984	4	0.88					
10	11	1984	5	0.92					
10	11	1984	6	0.76					
10	11	1984	7	1.00					
10	11	1984	8	1.01					
10	11	1984	9	0.78					
10	11	1984	10	0.83					
10	11	1984	11	0.97					
10	11	1984	12	0.78					
11	11	1984	1	0.73					
11	11	1984	2	0.91					
11	11	1984	3	0.71					
11	11	1984	4	0.86					
11	11	1984	5	0.91					
11	11	1984	6	0.75					
11	11	1984	7	0.99					
11	11	1984	8	1.00					
11	11	1984	9	0.77					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
11	11	1984	10	0.82					
11	11	1984	11	0.96					
11	11	1984	12	0.77					
12	11	1984	1	0.73					
12	11	1984	2	0.90					
12	11	1984	3	0.70					
12	11	1984	4	0.85					
12	11	1984	5	0.92					
12	11	1984	6	0.75					
12	11	1984	7	0.98					
12	11	1984	8	1.00					
12	11	1984	9	0.76					
12	11	1984	10	0.83					
12	11	1984	11	0.96					
12	11	1984	12	0.76					
13	11	1984	1	0.72					
13	11	1984	2	0.89					
13	11	1984	3	0.69					
13	11	1984	4	0.86					
13	11	1984	5	0.90					
13	11	1984	6	0.75					
13	11	1984	7	0.98					
13	11	1984	8	0.99					
13	11	1984	9	0.76					
13	11	1984	10	0.83					
13	11	1984	11	0.96					
13	11	1984	12	0.76					
14	11	1984	1	0.71					
14	11	1984	2	0.87					
14	11	1984	3	0.68					
14	11	1984	4	0.85					
14	11	1984	5	0.89					
14	11	1984	6	0.73					
14	11	1984	7	0.97					
14	11	1984	8	0.98					
14	11	1984	9	0.75					
14	11	1984	10	0.81					
14	11	1984	11	0.95					
14	11	1984	12	0.74					
15	11	1984	1	0.70					
15	11	1984	2	0.89					
15	11	1984	3	0.68					
15	11	1984	4	0.86					
15	11	1984	5	0.90					
15	11	1984	6	0.73					
15	11	1984	7	0.98					
15	11	1984	8	1.00					
15	11	1984	9	0.76					
15	11	1984	10	0.82					
15	11	1984	11	0.95					
15	11	1984	12	0.74					
16	11	1984	1	0.71					
16	11	1984	2	0.88					
16	11	1984	3	0.66					
16	11	1984	4	0.86					
16	11	1984	5	0.90					
16	11	1984	6	0.74					
16	11	1984	7	0.98					
16	11	1984	8	1.00					
16	11	1984	9	0.76					
16	11	1984	10	0.84					
16	11	1984	11	0.96					
16	11	1984	12	0.74					
17	11	1984	1	0.71					
17	11	1984	2	0.88					
17	11	1984	3	0.66					
17	11	1984	4	0.84					
17	11	1984	5	0.90					
17	11	1984	6	0.72					
17	11	1984	7	0.98					
17	11	1984	8	0.99					
17	11	1984	9	0.75					
17	11	1984	10	0.82					
17	11	1984	11	0.96					
17	11	1984	12	0.74					
18	11	1984	1	0.71					
18	11	1984	2	0.88					
18	11	1984	3	0.65					
18	11	1984	4	0.84					
18	11	1984	5	0.90					
18	11	1984	6	0.72					
18	11	1984	7	0.98					
18	11	1984	8	0.99					
18	11	1984	9	0.75					
18	11	1984	10	0.82					
18	11	1984	11	0.96					
18	11	1984	12	0.74					
19	11	1984	1	0.70					
19	11	1984	2	0.87					
19	11	1984	3	0.66					
19	11	1984	4	0.82					
19	11	1984	5	0.89					
19	11	1984	6	0.72					
19	11	1984	7	0.96					
19	11	1984	8	0.99					
19	11	1984	9	0.74					
19	11	1984	10	0.80					
19	11	1984	11	0.94					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
19	11	1984	12	0.74					
20	11	1984	1	0.69					
20	11	1984	2	0.88					
20	11	1984	3	0.65					
20	11	1984	4	0.82					
20	11	1984	5	0.89					
20	11	1984	6	0.71					
20	11	1984	7	0.94					
20	11	1984	8	0.98					
20	11	1984	9	0.74					
20	11	1984	10	0.78					
20	11	1984	11	0.94					
20	11	1984	12	0.72					
21	11	1984	1	0.69					
21	11	1984	2	0.86					
21	11	1984	3	0.64					
21	11	1984	4	0.80					
21	11	1984	5	0.88					
21	11	1984	6	0.70					
21	11	1984	7	0.92					
21	11	1984	8	0.97					
21	11	1984	9	0.74					
21	11	1984	10	0.78					
21	11	1984	11	0.92					
21	11	1984	12	0.71					
22	11	1984	1	0.68					
22	11	1984	2	0.84					
22	11	1984	3	0.64					
22	11	1984	4	0.80					
22	11	1984	5	0.87					
22	11	1984	6	0.69					
22	11	1984	7	0.90					
22	11	1984	8	0.97					
22	11	1984	9	0.74					
22	11	1984	10	0.78					
22	11	1984	11	0.92					
22	11	1984	12	0.70					
23	11	1984	1	0.68					
23	11	1984	2	0.84					
23	11	1984	3	0.64					
23	11	1984	4	0.78					
23	11	1984	5	0.87					
23	11	1984	6	68.00					
23	11	1984	7	0.95					
23	11	1984	8	0.95					
23	11	1984	9	0.74					
23	11	1984	10	0.78					
23	11	1984	11	0.92					
23	11	1984	12	7.00					
24	11	1984	1	0.68					
24	11	1984	2	0.84					
24	11	1984	3	0.64					
24	11	1984	4	0.78					
24	11	1984	5	0.87					
24	11	1984	6	0.68					
24	11	1984	7	0.95					
24	11	1984	8	0.95					
24	11	1984	9	0.74					
24	11	1984	10	0.78					
24	11	1984	11	0.92					
24	11	1984	12	0.70					
25	11	1984	1	0.67					
25	11	1984	2	0.84					
25	11	1984	3	63.00					
25	11	1984	4	0.78					
25	11	1984	5	0.86					
25	11	1984	6	0.67					
25	11	1984	7	0.94					
25	11	1984	8	0.95					
25	11	1984	9	0.73					
25	11	1984	10	0.77					
25	11	1984	11	0.91					
25	11	1984	12	0.70					
26	11	1984	1	0.66					
26	11	1984	2	0.83.					
26	11	1984	3	0.63					
26	11	1984	4	0.78					
26	11	1984	5	0.86					
26	11	1984	6	0.67					
26	11	1984	7	0.94					
26	11	1984	8	0.94					
26	11	1984	9	0.72					
26	11	1984	10	0.76					
26	11	1984	11	0.90					
26	11	1984	12	0.70					
27	11	1984	1	0.66					
27	11	1984	2	0.83					
27	11	1984	3	0.63					
27	11	1984	4	0.77					
27	11	1984	5	0.84					
27	11	1984	6	0.66					
27	11	1984	7	0.92					
27	11	1984	8	0.94					
27	11	1984	9	0.70					
27	11	1984	10	0.76					
27	11	1984	11	0.89					
27	11	1984	12	0.69					
28	11	1984	1	0.64					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
28	11	1984	2	0.80					
28	11	1984	3	0.60					
28	11	1984	4	0.77					
28	11	1984	5	0.84					
28	11	1984	6	0.64					
28	11	1984	7	0.90					
28	11	1984	8	0.92					
28	11	1984	9	0.69					
28	11	1984	10	0.74					
28	11	1984	11	0.88					
28	11	1984	12	0.68					
29	11	1984	1	0.64					
29	11	1984	2	0.80					
29	11	1984	3	0.59					
29	11	1984	4	0.76					
29	11	1984	5	0.80					
29	11	1984	6	0.64					
29	11	1984	7	0.89					
29	11	1984	8	0.90					
29	11	1984	9	0.69					
29	11	1984	10	0.74					
29	11	1984	11	0.88					
29	11	1984	12	0.67					
30	11	1984	1	0.64					
30	11	1984	2	0.80					
30	11	1984	3	0.58					
30	11	1984	4	0.76					
30	11	1984	5	0.80					
30	11	1984	6	0.63					
30	11	1984	7	0.88					
30	11	1984	8	0.90					
30	11	1984	9	0.67					
30	11	1984	10	0.72					
30	11	1984	11	0.87					
30	11	1984	12	0.65					
1	12	1984	1	0.64					
1	12	1984	2	0.80					
1	12	1984	3	0.58					
1	12	1984	4	0.76					
1	12	1984	5	0.80					
1	12	1984	6	0.62					
1	12	1984	7	0.88					
1	12	1984	8	0.90					
1	12	1984	9	0.67					
1	12	1984	10	0.73					
1	12	1984	11	0.87					
1	12	1984	12	0.75					
2	12	1984	1	0.62					
2	12	1984	2	0.79					
2	12	1984	3	0.58					
2	12	1984	4	0.74					
2	12	1984	5	0.80					
2	12	1984	6	0.61					
2	12	1984	7	0.87					
2	12	1984	8	0.89					
2	12	1984	9	0.66					
2	12	1984	10	0.72					
2	12	1984	11	0.86					
2	12	1984	12	0.75					
3	12	1984	1	0.60					
3	12	1984	2	0.77					
3	12	1984	3	0.58					
3	12	1984	4	0.72					
3	12	1984	5	0.80					
3	12	1984	6	0.60					
3	12	1984	7	0.86					
3	12	1984	8	0.89					
3	12	1984	9	0.65					
3	12	1984	10	0.71					
3	12	1984	11	0.85					
3	12	1984	12	0.75					
4	12	1984	1	0.60					
4	12	1984	2	0.77					
4	12	1984	3	0.58					
4	12	1984	4	0.72					
4	12	1984	5	0.80					
4	12	1984	6	0.60					
4	12	1984	7	0.86					
4	12	1984	8	0.89					
4	12	1984	9	0.65					
4	12	1984	10	0.71					
4	12	1984	11	0.85					
4	12	1984	12	0.75					
5	12	1984	1	0.60					
5	12	1984	2	0.77					
5	12	1984	3	0.56					
5	12	1984	4	0.72					
5	12	1984	5	0.79					
5	12	1984	6	0.60					
5	12	1984	7	0.86					
5	12	1984	8	0.88					
5	12	1984	9	0.68					
5	12	1984	10	0.72					
5	12	1984	11	0.86					
5	12	1984	12	0.62					
6	12	1984	1	0.61					
6	12	1984	2	0.76					
6	12	1984	3	0.55					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
6	12	1984	4	0.72					
6	12	1984	5	0.78					
6	12	1984	6	0.60					
6	12	1984	7	0.86					
6	12	1984	8	0.88					
6	12	1984	9	0.68					
6	12	1984	10	0.72					
6	12	1984	11	0.86					
6	12	1984	12	0.62					
7	12	1984	1	0.61					
7	12	1984	2	0.76					
7	12	1984	3	0.55					
7	12	1984	4	0.72					
7	12	1984	5	0.78					
7	12	1984	6	0.60					
7	12	1984	7	0.86					
7	12	1984	8	0.87					
7	12	1984	9	0.68					
7	12	1984	10	0.70					
7	12	1984	11	0.86					
7	12	1984	12	0.62					
8	12	1984	1	0.61					
8	12	1984	2	0.76					
8	12	1984	3	0.54					
8	12	1984	4	0.72					
8	12	1984	5	0.78					
8	12	1984	6	0.60					
8	12	1984	7	0.86					
8	12	1984	8	0.87					
8	12	1984	9	0.67					
8	12	1984	10	0.70					
8	12	1984	11	0.86					
8	12	1984	12	0.62					
9	12	1984	1	0.61					
9	12	1984	2	0.76					
9	12	1984	3	0.55					
9	12	1984	4	0.72					
9	12	1984	5	0.78					
9	12	1984	6	0.58					
9	12	1984	7	0.86					
9	12	1984	8	0.87					
9	12	1984	9	0.67					
9	12	1984	10	0.70					
9	12	1984	11	0.86					
9	12	1984	12	0.61					
10	12	1984	1	0.60					
10	12	1984	2	0.74					
10	12	1984	3	0.53					
10	12	1984	4	0.69					
10	12	1984	5	0.78					
10	12	1984	6	0.58					
10	12	1984	7	0.84					
10	12	1984	8	0.86					
10	12	1984	9	0.54					
10	12	1984	10	0.68					
10	12	1984	11	0.84					
10	12	1984	12	0.59					
11	12	1984	1	0.60					
11	12	1984	2	0.74					
11	12	1984	3	0.52					
11	12	1984	4	0.68					
11	12	1984	5	0.78					
11	12	1984	6	0.58					
11	12	1984	7	0.84					
11	12	1984	8	0.85					
11	12	1984	9	0.54					
11	12	1984	10	0.68					
11	12	1984	11	0.84					
11	12	1984	12	0.58					
12	12	1984	1	0.59					
12	12	1984	2	0.73					
12	12	1984	3	0.52					
12	12	1984	4	0.68					
12	12	1984	5	0.77					
12	12	1984	6	0.58					
12	12	1984	7	0.83					
12	12	1984	8	0.84					
12	12	1984	9	0.54					
12	12	1984	10	0.67					
12	12	1984	11	0.64					
12	12	1984	12	0.57					
13	12	1984	1	0.58					
13	12	1984	2	0.72					
13	12	1984	3	0.50					
13	12	1984	4	0.66					
13	12	1984	5	0.74					
13	12	1984	6	0.58					
13	12	1984	7	0.82					
13	12	1984	8	0.84					
13	12	1984	9	0.53					
13	12	1984	10	0.66					
13	12	1984	11	0.64					
13	12	1984	12	0.57					
14	12	1984	1	0.56					
14	12	1984	2	0.70					
14	12	1984	3	0.50					
14	12	1984	4	0.66					
14	12	1984	5	0.73					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH m X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
14	12	1984	6	0.57					
14	12	1984	7	0.80					
14	12	1984	8	0.83					
14	12	1984	9	0.53					
14	12	1984	10	0.66					
14	12	1984	11	0.64					
14	12	1984	12	0.56					
15	12	1984	1	0.56					
15	12	1984	2	0.70					
15	12	1984	3	0.50					
15	12	1984	4	0.66					
15	12	1984	5	0.73					
15	12	1984	6	0.57					
15	12	1984	7	0.80					
15	12	1984	8	0.83					
15	12	1984	9	0.53					
15	12	1984	10	0.66					
15	12	1984	11	0.64					
15	12	1984	12	0.56					
16	12	1984	1	0.55					
16	12	1984	2	0.70					
16	12	1984	3	0.50					
16	12	1984	4	0.66					
16	12	1984	5	0.73					
16	12	1984	6	0.57					
16	12	1984	7	0.80					
16	12	1984	8	0.83					
16	12	1984	9	0.53					
16	12	1984	10	0.67					
16	12	1984	11	0.64					
16	12	1984	12	0.55					
17	12	1984	1	0.54					
17	12	1984	2	0.69					
17	12	1984	3	0.49					
17	12	1984	4	0.66					
17	12	1984	5	0.73					
17	12	1984	6	0.56					
17	12	1984	7	0.80					
17	12	1984	8	0.83					
17	12	1984	9	0.52					
17	12	1984	10	0.66					
17	12	1984	11	0.64					
17	12	1984	12	0.55					
18	12	1984	1	0.54					
18	12	1984	2	0.69					
18	12	1984	3	0.48					
18	12	1984	4	0.64					
18	12	1984	5	0.72					
18	12	1984	6	0.54					
18	12	1984	7	0.79					
18	12	1984	8	0.80					
18	12	1984	9	0.52					
18	12	1984	10	0.64					
18	12	1984	11	0.64					
18	12	1984	12	0.54					
19	12	1984	1	0.53					
19	12	1984	2	0.68					
19	12	1984	3	0.47					
19	12	1984	4	0.63					
19	12	1984	5	0.71					
19	12	1984	6	0.53					
19	12	1984	7	0.79					
19	12	1984	8	0.80					
19	12	1984	9	0.52					
19	12	1984	10	0.64					
19	12	1984	11	0.64					
19	12	1984	12	0.54					
20	12	1984	1	0.52					
20	12	1984	2	0.67					
20	12	1984	3	0.47					
20	12	1984	4	0.63					
20	12	1984	5	0.70					
20	12	1984	6	0.53					
20	12	1984	7	0.78					
20	12	1984	8	0.80					
20	12	1984	9	0.51					
20	12	1984	10	0.64					
20	12	1984	11	0.64					
20	12	1984	12	0.64					
21	12	1984	1	0.53					
21	12	1984	2	0.67					
21	12	1984	3	0.46					
21	12	1984	4	0.63					
21	12	1984	5	0.70					
21	12	1984	6	0.52					
21	12	1984	7	0.77					
21	12	1984	8	0.80					
21	12	1984	9	0.51					
21	12	1984	10	0.63					
21	12	1984	11	0.63					
21	12	1984	12	0.53					
22	12	1984	1	0.52					
22	12	1984	2	0.67					
22	12	1984	3	0.46					
22	12	1984	4	0.62					
22	12	1984	5	0.69					
22	12	1984	6	0.52					
22	12	1984	7	0.77					

TABLE 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	POND	POND DEPTH @ X.XX	WATER INFLOW? Y or N	POND OVER-FLOW? Y or N	NUMBER OF DEAD FISH/ SHRIMP	SPECIES CODE	SALINITY ppt XX
22	12	1984	8	0.80					
22	12	1984	9	0.50					
22	12	1984	10	0.63					
22	12	1984	11	0.64					
22	12	1984	12	0.52					
23	12	1984	1	0.52					
23	12	1984	2	0.67					
23	12	1984	3	0.45					
23	12	1984	4	0.62					
23	12	1984	5	0.69					
23	12	1984	6	0.52					
23	12	1984	7	0.77					
23	12	1984	8	0.80					
23	12	1984	9	0.50					
23	12	1984	10	0.63					
23	12	1984	11	0.64					
23	12	1984	12	0.52					
24	12	1984	1	0.52					
24	12	1984	2	0.67					
24	12	1984	3	0.45					
24	12	1984	4	0.62					
24	12	1984	5	0.69					
24	12	1984	6	0.51					
24	12	1984	7	0.77					
24	12	1984	8	0.80					
24	12	1984	9	0.49					
24	12	1984	10	0.63					
24	12	1984	11	0.63					
24	12	1984	12	0.51					
25	12	1984	1	0.52					
25	12	1984	2	0.67					
25	12	1984	3	0.44					
25	12	1984	4	0.62					
25	12	1984	5	0.69					
25	12	1984	6	0.51					
25	12	1984	7	0.76					
25	12	1984	8	0.79					
25	12	1984	9	0.49					
25	12	1984	10	0.62					
25	12	1984	11	0.62					
25	12	1984	12	0.51					
26	12	1984	1	0.51					
26	12	1984	2	0.66					
26	12	1984	3	0.43					
26	12	1984	4	0.61					
26	12	1984	5	0.68					
26	12	1984	6	0.50					
26	12	1984	7	0.75					
26	12	1984	8	0.78					
26	12	1984	9	0.49					
26	12	1984	10	0.61					
26	12	1984	11	0.62					
26	12	1984	12	0.51					
27	12	1984	1	0.50					
27	12	1984	2	0.64					
27	12	1984	3	0.42					
27	12	1984	4	0.61					
27	12	1984	5	0.67					
27	12	1984	6	0.49					
27	12	1984	7	0.73					
27	12	1984	8	0.78					
27	12	1984	9	0.48					
27	12	1984	10	0.60					
27	12	1984	11	0.60					
27	12	1984	12	0.50					

TABLE 3. Weekly and Twice Weekly Measurements. Nong Sua, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL	AMMONIA			TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT				N	N	NO2-N	NO3-N				A	B	a	b	c
XX	XX	XXXX	Y or N		XXXX	mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l	mg/l		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	mg/m3	mg/m3	mg/m3
						XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	CaCO3	CaCO3	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXX	XXX	XXXX
21	12	1983		1																										
21	12	1983		2																					0.008					
21	12	1983		3																					0.003					
21	12	1983		4																					0.003					
21	12	1983		5																					0.008					
21	12	1983		6																					0.006					
21	12	1983		7																										
21	12	1983		8																										
21	12	1983		9																					0.003					
21	12	1983		10																					0.003					
21	12	1983		11																					0.005					
21	12	1983		12																					0.003					
23	12	1983		1																					0.016					
23	12	1983		2																					0.252					
23	12	1983		3																					0.319					
23	12	1983		4																					0.331					
23	12	1983		5																					0.351					
23	12	1983		6																					0.384					
23	12	1983		7																										
23	12	1983		8																										
23	12	1983		9																					0.33					
23	12	1983		10																					0.283					
23	12	1983		11																					0.298					
23	12	1983		12																					0.291					
25	12	1983		1																					0.246					
25	12	1983		2														3.2												
25	12	1983		3														3.1												
25	12	1983		4														3.1												
25	12	1983		5														3.3												
25	12	1983		6														3.4												
25	12	1983		7														3.5												
25	12	1983		8														3.4												
25	12	1983		9														3.5												
25	12	1983		10														3.3												
25	12	1983		11														3.4												
25	12	1983		12														3.2												
30	12	1983		1														3.4												
30	12	1983		2																					0.119					
30	12	1983		3																					0.146					
30	12	1983		4																					0.166					
30	12	1983		5																					0.153					
30	12	1983		6																					0.163					
30	12	1983		7																										
30	12	1983		8																										
30	12	1983		9																					0.163					
30	12	1983		10																					0.136					
30	12	1983		11																					0.138					
30	12	1983		12																					0.138					
																									0.13					

TABLE 3. Weekly and Twice Weekly Measurements. Nong Sua, Thailand, Cycle I, Dry Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN TOP	OXYGEN MID	OXYGEN BOT	POND TEMP. TOP	POND TEMP. MID	POND TEMP. BOT	MAX TEMP TOP	MAX TEMP BOT	MIN TEMP TOP	MIN TEMP BOT	ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2L3-N	TOTAL P	ORTHO PO4-P	S.DISK A	S.DISK B	CHLOROPHYLL a	CHLOROPHYLL b	CHLOROPHYLL c
DAY	MONTH	YEAR	Y or N			mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l CaCO3	mg/l CaCO3		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	mg/m3	mg/m3	mg/m3
XX	XX	XXXX			XXXX	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
1	1	1984		1												45		7.5												
1		34		2												40		7.6												
1	1	1984		3												50		7.8												
1	1	1984		4												43		7.4												
1	1	1984		5												40		7.5												
1	1	1984		6												39		7.6												
1	1	1984		7												41		7.6												
1	1	1984		8												50		7.7												
1	1	1984		9												48		7.8												
1	1	1984		10												45		7.4												
1	1	1984		11												50		7.5												
1	1	1984		12												48		7.6												
9	1	1984		1														7.5												
9	1	1984		2														7.6												
9	1	1984		3														7.7												
9	1	1984		4														7.3												
9	1	1984		5														7.5												
9	1	1984		6														7.5												
9	1	1984		7														7.6												
9	1	1984		8														7.6												
9	1	1984		9														7.7												
9	1	1984		10														7.5												
9	1	1984		11														7.6												
9	1	1984		12														7.5												
15	1	1984		1																					0.081					
15	1	1984		2																					0.096					
15	1	1984		3																					0.146					
15	1	1984		4																					0.096					
15	1	1984		5																					0.077					
15	1	1984		6																										
15	1	1984		7																										
15	1	1984		8																										
15	1	1984		9																					0.133					
15	1	1984		10																					0.096					
15	1	1984		11																					0.076					
15	1	1984		12																					0.046					
16	1	1984		1												43		7.3												
16	1	1984		2												38		7.4												
16	1	1984		3												45		7.6												
16	1	1984		4												41		7.3												
16	1	1984		5												38		7.4												
16	1	1984		6												37		7.5												
16	1	1984		7												36		7.5												
16	1	1984		8												48		7.6												
16	1	1984		9												45		7.6												
16	1	1984		10												42		7.4												
16	1	1984		11												45		7.5												
16	1	1984		12												46		7.5												
23	1	1984		1														7.2												
23	1	1984		2														7.3												

TABLE 3. Weekly and Twice Weekly Measurements. Nong Sua, Thailand, Cycle I, Dry Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR	Y or N			TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
XX	XX	XXXX			XXXX	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
						mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l CaCO3	mg/l CaCO3		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	mg/m3	mg/m3	mg/m3
23	1	1984		3																										
23	1	1984		4														7.5												
23	1	1984		5														7.2												
23	1	1984		6														7.2												
23	1	1984		7														7.4												
23	1	1984		8														7.3												
23	1	1984		9														7.5												
[illegible]	1	1984		10														7.4												
23	1	1984		11														7.3												
23	1	1984		12														7.4												
24	1	1984		1														7.4												
24	1	1984		2																										
24	1	1984		3																								22		
24	1	1984		4																								7		
24	1	1984		5																								78		
24	1	1984		6																								22		
24	1	1984		7																								17		
24	1	1984		8																										
24	1	1984		9																										
24	1	1984		10																								28		
24	1	1984		11																								26		
24	1	1984		12																								37		
30	1	1984		1																								40		
30	1	1984		2												40		7.2										26		
30	1	1984		3												35		7.2												
30	1	1984		4												42		7.3												
30	1	1984		5												37		7.1												
30	1	1984		6												35		7.1												
30	1	1984		7												34		7.3												
30	1	1984		8												34		7.2												
30	1	1984		9												45		7.4												
30	1	1984		10												43		7.3												
30	1	1984		11												40		7.2												
30	1	1984		12												41		7.3												
6	2	1984		1												43		7.3												
6	2	1984		2																								5		
6	2	1984		3																								12		
6	2	1984		4																								10		
6	2	1984		5																								6		
6	2	1984		6																								4		
6	2	1984		7																										
6	2	1984		8																										
6	2	1984		9																								2		
6	2	1984		10																								8		
6	2	1984		11																								8		
6	2	1984		12																								15		
7	2	1984		1														7.1										5		
7	2	1984		2														7.3												
7	2	1984		3														7.4												

TABLE 3. Weekly and Twice Weekly Measurements. Nong Sua, Thailand, Cycle I, Dry Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL	AMMONIA	NO2-N	NO3-N	TOTAL	TOTAL	ORTHO	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT				N	N			NO2&3-N	P	PO4-P	A	B	a	b	c
XX	XX	XXXX	Y or N		XXXX	mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l CaCO3	mg/l CaCO3		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	ug/m3	ug/m3	ug/m3
						XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
7	2	1984		4																										
7	2	1984		5														7												
7	2	1984		6														7.2												
7	2	1984		7														7.3												
7	2	1984		8														7.2												
7	2	1984		9														7.3												
7	2	1984		10														7.3												
7	2	1984		11														7.2												
7	2	1984		12														7.2												
16	2	1984		1														7.3												
16	2	1984		2												38		7.1												
16	2	1984		3												32		7.2												
16	2	1984		4												40		7.3												
16	2	1984		5												35		7												
16	2	1984		6												34		7												
16	2	1984		7												32		7.2												
16	2	1984		8												32		7.1												
16	2	1984		9												42		7.1												
16	2	1984		10												41		7.2												
16	2	1984		11												38		7.1												
16	2	1984		12												39		7.1												
27	2	1984		1												40		7.2												
27	2	1984		2														6.9												
27	2	1984		3														7.1												
27	2	1984		4														7.1												
27	2	1984		5														7.1												
27	2	1984		6														7												
27	2	1984		7														7.1												
27	2	1984		8														7												
27	2	1984		9														7.1												
27	2	1984		10														7.2												
27	2	1984		11														7												
27	2	1984		12														7												
5	3	1984		1														7.1												
5	3	1984		2												36		6.9												
5	3	1984		3												30		7.1												
5	3	1984		4												36		6.9												
5	3	1984		5												35		7												
5	3	1984		6												34		6.9												
5	3	1984		7												33		7												
5	3	1984		8												32		6.9												
5	3	1984		9												40		7												
5	3	1984		10												38		7.1												
5	3	1984		11												38		6.9												
5	3	1984		12												37		7												
																38		7.1												

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE DAY XX	MONTH XX	YEAR XXXX	EXTRA DATA? Y or N	POND	D.O. SAMPLE TIME XXXX	OXYGEN TOP mg/l XX.X	OXYGEN MID mg/l XX.X	OXYGEN BOT mg/l XX.X	POND TEMP. TOP deg C XX.X	POND TEMP. MID deg C XX.X	POND TEMP. BOT deg C XX.X	MAX TEMP TOP deg C XX.X	MAX TEMP BOT deg C XX.X	MIN TEMP TOP deg C XX.X	MIN TEMP BOT deg C XX.X	ALKA mg/l CaCO3 XXX	T.HARD mg/l CaCO3 XXX	pH XX.X	KJELDAHL N mg/l X.XX	AMMONIA N mg/l X.XX	NO2-N mg/l X.XX	NO3-N mg/l X.XX	TOTAL NO2&3-N mg/l XX.XX	TOTAL P mg/l X.XX	ORTHO PO4-P mg/l X.XX	S.DISK A cm XX	S.DISK B cm XX	CHLOROPHYLL a mg/m3 XXXX	CHLOROPHYLL b mg/m3 XXXX	CHLOROPHYLL c mg/m3 XXXX
6	8	1984		1		8.4						32.5		27.5		111	484	7.7								40				
6	8	1984		2		6.0										130	620	7.2								90				
6	8	1984		3		7.4										122	632	7.5								60				
6	8	1984		4		6.3										122	506	7.3								50				
6	8	1984		5		6.5										125	580	7.3								80				
6	8	1984		6		6.8										126	612	7.4								60				
6	8	1984		7		8.1										116	559	7.8								60				
6	8	1984		8		5.9										114	594	7.3								90				
6	8	1984		9		6.4										121	560	7.5								50				
6	8	1984		10		6.0										115	568	7.4								60				
6	8	1984		11		4.0										128	686	7.2								90				
6	8	1984		12		6.1										119	578	7.5								60				
13	8	1984		1		5.4						32.5		28.0		111	450	7.3								45				
13	8	1984		2		3.5										138	520	7.2								75				
13	8	1984		3		4.2										134	580	7.2								65				
13	8	1984		4		3.6										132	482	7.2								45				
13	8	1984		5		3.3										143	524	7.4								62				
13	8	1984		6		4.4										140	590	7.3								45				
13	8	1984		7		5.8										119	520	7.7								60				
13	8	1984		8		3.8										128	544	7.3								55				
13	8	1984		9		4.2										139	582	7.5								60				
13	8	1984		10		3.8										122	550	7.4								42				
13	8	1984		11		4.0										136	652	7.5								80				
13	8	1984		12		4.1										134	594	7.5								50				
16	8	1984		1												111	450		0.33		0.01		0.11	0.02						
16	8	1984		2												138	520		0.33		0.01		0.11	0.02						
16	8	1984		3												135	580		0.65		0.05		0.09	0.02						
16	8	1984		4												132	482		0.65		0.09		0.11	0.01						
16	8	1984		5												143	524		0.65		0.00		0.07	0.01						
16	8	1984		6												141	590		0.33		0.00		0.10	0.01						
16	8	1984		7												119	520		0.16		0.00		0.12	0.03						
16	8	1984		8												128	544		0.65		0.00		0.09	0.02						
16	8	1984		9												139	682		0.81		0.01		0.08	0.02						
16	8	1984		10												123	550		0.33		0.00		0.08	0.02						
16	8	1984		11												136	652		0.49		0.01		0.07	0.02						
16	8	1984		12												134	594		0.49		0.01		0.07	0.02						
20	8	1984		1		5.8						33.5	33.0	28.5	28.5	129	510	7.5								42		14		
20	8	1984		2		4.9										150	652	7.4								67		16		
20	8	1984		3		4.9										151	534	7.4								48		11		
20	8	1984		4		5.3										144	490	7.5								45		12		
20	8	1984		5		5.1										154	530	7.5								62		16		
20	8	1984		6		5.0										161	656	7.6								39		9		
20	8	1984		7		6.1										120	588	7.9								44		16		
20	8	1984		8		5.2										138	600	7.4								47		15		
20	8	1984		9		4.9										163	594	7.7								41		10		
20	8	1984		10		5.4										141	556	7.6								50		12		
20	8	1984		11		4.7										160	680	7.5								58		12		
20	8	1984		12		5.0										159	641	7.6								35		13		
27	8	1984		1		6.5		29.0		26.8						137	536	7.7								40		11		

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR	Y or N			TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
XX	XX	XXXX			XXXX	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
27	8	1984		2		4.6			29.0		29.2					160	720	7.5								75		7		
27	8	1984		3		5.7			27.2		27.2					156	870	7.6								64		3		
27	8	1984		4		6.1			29.0		29.1					155	628	7.8								45		9		
27	8	1984		5		4.9			29.2		29.1					171	646	7.7								65		9		
27	8	1984		6		5.5			27.2		27.2	35.0	33.5	28.5	28.5	167	756	7.8								56		7		
27	8	1984		7		6.1			29.0		28.9	34.5	34.0	27.0	29.0	122	618	7.9								36		13		
27	8	1984		8		4.9			29.1		29.0					144	666	7.7								55		5		
27	8	1984		9		5.5			29.0		29.2					165	620	7.9								56		7		
27	8	1984		10		9.7			29.0		29.0					148	630	7.9								47		8		
27	8	1984		11		4.1			29.2		29.2	35.9	34.5	27.5	29.0	169	744	7.7								65		7		
27	8	1984		12		5.2			29.0		29.2					166	648	7.9								42		7		
3	9	1984		1		6.0	6.0	6.0	28.8		28.7					110	412	7.7								56		28		
3	9	1984		2		5.1	5.0	5.0	28.8		28.7					160	692	7.8								81		9		
3	9	1984		3		5.5	5.5	5.5	28.9		28.8					129	566	7.8								90		12		
3	9	1984		4		5.5	5.5	5.4	28.7		28.6					159	556	7.8								64		12		
3	9	1984		5		5.0	4.8	4.6	28.8		28.6					173	634	7.8								61		9		
3	9	1984		6		5.8	5.6	5.7	28.9		28.9	33.0	31.5	2[illegible].5	27.5	140	630	8.0								68		16		
3	9	1984		7		6.4	6.4	6.4	28.5		28.4	34.5	30.0	27.5	28.5	128	624	8.1								54		18		
3	9	1984		8		5.3	5.3	5.3	28.8		28.7					149	654	8.0								72		8		
3	9	1984		9		5.5	5.4	5.4	29.0		28.9					144	568	8.2								53		12		
3	9	1984		10		6.0	6.0	6.0	28.6		28.6					143	570	8.2								62		12		
3	9	1984		11		4.8	4.6	4.6	28.8		28.6	33.5	33.5	28.0	28.5	172	740	8.0								61		9		
3	9	1984		12		5.3	5.2	5.2	28.8		28.8					145	548	8.2								51		15		
10	9	1984		1			5.8									121	441	7.6								45		18		
10	9	1984		2			5.0									168	694	7.8								85		8		
10	9	1984		3			4.6									135	584	7.9								72		8		
10	9	1984		4			5.6									161	564	8.0								40		13		
10	9	1984		5			5.1									181	640	8.0								61		11		
10	9	1984		6			5.1					33.5	33.5	28.5	28.5	142	654	7.9								69		9		
10	9	1984		7			6.8					34.0	32.0	28.0	29.0	133	642	8.2								42		32		
10	9	1984		8			5.4									151	680	8.0								76		8		
10	9	1984		9			5.8									147	564	8.2								75		12		
10	9	1984		10			6.2									143	610	8.1								68		12		
10	9	1984		11			4.7					34.5	33.0	28.0	27.5	180	750	8.0								56		9		
10	9	1984		12			5.4									153	584	8.2								56		12		
17	9	1984		1		6.3	6.3	6.2	31.0		30.2					118	418	7.7								48		28		
17	9	1984		2		5.6	5.6	5.7	31.1		30.8					143	620	7.7								85		12		
17	9	1984		3		4.2	4.1	4.1	30.4		30.2					118	436	7.6								68		7		
17	9	1984		4		6.6	6.6	6.5	31.0		30.3					139	498	8.0								67		6		
17	9	1984		5		5.4	5.4	5.2	31.2		30.2					134	558	7.8								64		12		
17	9	1984		6		5.0	5.0	4.8	30.6		30.0	34.0	32.0	29.0	28.5	147	550	7.7								61		4		
17	9	1984		7		6.2	6.1	5.9	30.5		29.7	33.0	35.0	28.5	27.0	115	520	7.8								50		5		
17	9	1984		8		5.5	5.4	5.3	30.5		30.0					144	628	7.8								77		4		
17	9	1984		9		5.5	5.5	5.3	30.6		29.9					123	480	7.9								47		4		
17	9	1984		10		5.8	5.7	5.6	30.5		29.8					126	504	7.9								60		4		
17	9	1984		11		4.9	4.6	4.5	30.5		29.8	35.5	35.0	28.5	28.0	170	656	7.0								64		3		
17	9	1984		12		4.3	5.1	4.9	30.5		29.9					125	496	8.0								52		9		
18	9	1984		1												117	412			0.03		0.01		0.04						
18	9	1984		2												137	604			0.12		0.00		0.05	0.02					

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD		KJELDAHL	AMMONIA			TOTAL	TOTAL	ORTHO	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT															
XX	XX	XXXX	Y or N		XXXX	mg/l XX.X	mg/l XX.X	mg/l XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	mg/l CaCO3 XXX	mg/l CaCO3 XX	pH XX.X	N mg/l X.XX	N mg/l X.XX	NO2-N mg/l X.XX	NO3-N mg/l X.XX	NO2&3-N mg/l XX.XX	P mg/l X.XX	PO4-P mg/l X.XX	A cm XX	B cm XX	a mg/m3 XXXX	b mg/m3 XXXX	c mg/m3 XXXX
18	9	1984		3																										
18	9	1984		4												117	476			0.03		0.00		0.03						
18	9	1984		5												134	490			0.03		0.01		0.04						
18	9	1984		6												155	560			0.06		0.00		0.04						
18	9	1984		7												118	544			0.05		0.00		0.03						
18	9	1984		8												112	580			0.05		0.00		0.06						
18	9	1984		9												138	616			0.05		0.01		0.04						
18	9	1984		10												121	480			0.06		0.00		0.04						
18	9	1984		11												126	502			0.05		0.00		0.04						
18	9	1984		12												162	636			0.05		0.00		0.04						
24	9	1984		1		5.3	5.3	5.1	30.0		29.0					121	474			0.05		0.00		0.04	0.01					
24	9	1984		2		4.8	5.0	5.1	31.0		30.0					140	464	7.6										10		
24	9	1984		3		4.8	4.8	5.0	30.5		30.0					145	575	7.6										4		
24	9	1984		4		5.9	5.9	5.8	31.0		30.0					146	530	7.6										2		
24	9	1984		5		5.0	5.1	5.1	30.0		30.0					144	576	7.8										1		
24	9	1984		6		5.0	4.9	4.9	30.0		30.0		34.5	29.0	30.0	154	616	7.5										1		
24	9	1984		7		5.6	5.5	5.5	30.0		29.5	35.0	34.5	29.5	30.0	139	556	7.5										1		
24	9	1984		8		5.2	5.4	5.5	30.0		29.5					151	540	7.6										5		
24	9	1984		9		5.2	5.0	4.8	31.0		30.0					139	560	7.6										2		
24	9	1984		10		5.7	5.5	5.5	29.5		29.5					151	448	7.7										2		
24	9	1984		11		5.2	5.1	4.8	30.0		30.0	35.0	33.0	28.0	29.0	164	480	7.8										1		
24	9	1984		12		5.0	5.0	4.8	30.0		30.0					156	642	7.4										1		
2	10	1984		1		5.5	5.5	5.5	30.5	30.5	30.0					158	448	7.6										4		
2	10	1984		2		5.1	4.9	4.8	29.5	29.0	29.0					127	603	7.5								45		0		
2	10	1984		3		5.3	5.3	5.2	30.1	30.0	30.0					140	670	7.7								70		1		
2	10	1984		4		5.7	5.6	5.3	30.5	30.5	29.8					172	696	7.6								70		3		
2	10	1984		5		4.4	4.7	4.8	31.0	31.0	30.0					165	616	7.3								50		0		
2	10	1984		6		5.8	5.5	4.9	30.0	30.1	30.0	30.9	30.0	29.0	28.5	129	587	7.8								59		1		
2	10	1984		7		5.4	5.2	5.1	31.0	30.0	30.0	31.0	30.5	27.0	28.5	147	607	7.9								48		0		
2	10	1984		8		5.0	5.0	5.0	31.0	31.0	29.8					151	640	7.8								50		1		
2	10	1984		9		5.1	4.9	4.5	30.5	30.0	29.8					136	521	7.6								67		3		
2	10	1984		10		5.2	5.0	5.0	30.1	30.1	30.1					179	650	7.8								63		3		
2	10	1984		11		5.8	5.5	5.4	29.9	30.0	30.0	31.5	30.0	28.0	28.5	142	687	7.9								40		5		
2	10	1984		12		5.0	4.8	4.7	30.5	30.0	30.0					157	622	7.5								43		8		
8	10	1984		1		7.1	7.0	7.1	29.2	29.0	29.7					140	604	7.6								49		7		
8	10	1984		2		6.1	6.0	5.9	30.0	30.1	30.0					113	424	7.9										9		
8	10	1984		3		6.6	6.8	7.1	30.0	30.1	30.0					100	356	7.9										5		
8	10	1984		4		6.6	6.5	6.5	30.0	30.1	30.0					114	500	7.9										3		
8	10	1984		5		7.1	7.0	6.9	30.2	30.2	30.0					103	540	7.9										3		
8	10	1984		6		6.7	6.8	6.8	30.1	30.1	30.1	34.0	33.0	29.0	29.0	134	520	7.9										2		
8	10	1984		7		8.4	8.5	8.5	30.1	30.1	30.0	34.5	35.0	30.0	29.0	114	608	7.9										3		
8	10	1984		8		6.5	6.5	6.5	31.0	30.5	30.1					108	628	8.3										8		
8	10	1984		9		5.6	5.6	5.5	30.0	30.0	30.0					115	472	7.9										6		
8	10	1984		10		7.1	7.1	7.0	30.1	30.5	30.0					113	496	7.6										20		
8	10	1984		11		6.4	6.4	6.3	30.0	29.0	29.8		33.5	29.0	29.0	115	600	7.9										3		
8	10	1984		12		5.8	5.5	5.2	30.0	30.1	30.0					126	528	7.7										3		
15	10	1984		1		6.3	6.1	6.0	28.7	28.5	28.5					106	512	7.6										9		
15	10	1984		2		5.9	5.8	5.8	28.8	28.5	28.5					200	440	7.6							0.03	38		8		
15	10	1984		3		5.5	5.4	5.4	28.5	28.2	28.1					158	548	7.7							0.01	61		12		
																208	468	7.7							0.01	47		5		

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
XX	XX	XXXX	Y or N		XXXX	mg/l XX.X	mg/l XX.X	mg/l XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	mg/l CaCO3 XXX	mg/l CaCO3 XXX	XX.X	mg/l X.XX	mg/l X.XX	mg/l X.XX	mg/l X.XX	mg/l XX.XX	mg/l X.XX	mg/l X.XX	cm XX	cm XX	mg/m3 XXXX	mg/m3 XXXX	mg/m3 XXXX
15	10	1984		4		4.6	4.3	4.1	28.5	28.3	28.2					212	468	7.8							0.01	42		13		
15	10	1984		5		5.5	5.4	5.2	28.8	28.3	28.2					260	540	7.8							0.01	41		20		
15	10	1984		6		6.2	6.2	6.1	29.3	28.3	28.3	32.5	32.5	28.0	28.0	220	560	8.0							0.00	60		4		
15	10	1984		7		6.4	6.3	6.1	28.9	28.5	28.2	34.0	34.0	28.0	28.0	192	580	8.0							0.01	35		5		
15	10	1984		8		5.9	5.8	5.8	29.5	29.0	29.0					212	604	7.7							0.01	63		3		
15	10	1984		9		5.5	5.5	5.5	28.3	28.3	28.1					124	536	7.7							0.00	52		3		
15	10	1984		10		5.2	5.3	5.2	29.0	28.5	28.5					120	480	7.8							0.02	45		5		
15	10	1984		11		5.8	5.3	4.7	28.5	28.3	28.3	35.5	34.0	27.5	28.0	148	560	7.4							0.02	31		5		
15	10	1984		12		5.3	5.2	5.0	28.3	28.3	28.0					128	504	7.5							0.01	45		4		
22	10	1984		1		6.6	6.5	6.4	29.0	29.0	29.0					172	468	7.6								40		13		
22	10	1984		2		5.3	5.2	5.2	30.0	29.0	29.0					168	544	7.2								52		4		
22	10	1984		3		5.7	5.6	5.6	28.8	28.8	28.8					120	440	7.2								49		7		
22	10	1984		4		5.8	5.7	5.6	29.0	29.0	29.0					130	440	7.4								42		8		
22	10	1984		5		5.8	5.7	5.6	29.0	29.0	29.0					157	492	7.2								42		5		
22	10	1984		6		6.0	5.9	5.9	29.0	29.0	28.8	32.0	31.0	29.0	29.0	125	500	7.4								59		4		
22	10	1984		7		6.5	6.4	6.4	28.5	28.5	28.5	34.0	32.0	28.5	28.0	136	528	7.4								48		7		
22	10	1984		8		6.0	5.9	5.9	29.0	29.0	29.0					123	520	7.2								71		5		
22	10	1984		9		5.6	5.9	5.9	28.7	28.7	28.7					143	436	7.5								60		5		
22	10	1984		10		5.5	5.4	5.4	28.5	28.5	28.5					127	432	7.2								34		6		
22	10	1984		11		4.6	4.5	4.4	29.0	29.0	29.0	33.5	33.0	28.5	28.0	133	472	7.0								36		1		
22	10	1984		12		5.7	5.5	5.4	28.8	28.8	28.8					139	456	7.2								44		7		
29	10	1984		1		7.2	7.1	7.0	28.8	28.8	28.5					130		7.7								36				
29	10	1984		2		5.8	5.7	5.5	28.8	27.0	28.5					121		7.8								48				
29	10	1984		3		6.5	6.4	6.4	28.5	28.4	28.3					112		7.6								38				
29	10	1984		4		6.5	6.4	6.4	28.9	28.8	28.5					118		7.6								54				
29	10	1984		5		5.5	5.4	5.4	28.8	28.7	28.5					114		7.3								40				
29	10	1984		6		6.2	6.2	6.2	28.6	28.5	28.4	32.5	31.0	28.0	28.0	116		7.5								48				
29	10	1984		7		6.1	6.0	5.9	29.1	29.1	29.0	33.0	32.0	27.5	27.5	120		7.5								33				
29	10	1984		8		5.9	5.8	5.7	28.2	28.1	28.0					138		7.7								58				
29	10	1984		9		6.5	6.5	6.4	29.4	28.9	28.0					120		7.5								41				
29	10	1984		10		6.2	6.2	6.1	29.1	29.0	29.0					120		7.5								32				
29	10	1984		11		5.1	5.0	4.9	29.0	29.0	28.9	31.5	31.0	28.0	28.0	120		7.2								30				
29	10	1984		12		6.1	6.0	5.9	28.7	28.1	28.0					112		7.5								35				
5	11	1984		1		7.8	7.7	7.6	28.0	27.8	27.5					130	580	7.7								53		11		
5	11	1984		2		6.6	6.5	6.4	28.0	27.8	27.0					142	612	7.5								40		13		
5	11	1984		3		7.8	7.5	7.4	28.0	27.8	27.0					140	492	7.6								44		20		
5	11	1984		4		7.8	7.6	7.5	27.0	27.5	27.2					146	524	7.9								58		11		
5	11	1984		5		6.6	6.5	6.5	28.0	27.8	27.0					146	520	7.6								59				
5	11	1984		6		7.3	7.2	7.2	28.0	27.8	27.0	32.0	31.0	25.0	25.0	136	554	7.6								50		10		
5	11	1984		7		7.8	7.6	7.5	27.5	27.2	27.0	31.5	31.0	26.0	25.0	130	528	7.7								40		14		
5	11	1984		8		7.3	7.2	7.1	28.0	27.5	27.0					122	540	7.7								49		14		
5	11	1984		9		7.0	6.9	6.8	28.0	27.5	27.0					124	492	7.7								41		8		
5	11	1984		10		7.3	7.2	7.1	27.8	27.2	26.9					130	476	7.7								38		14		
5	11	1984		11		6.6	6.5	6.1	27.8	27.0	26.8	32.5		26.5		134	442	7.5								31		10		
5	11	1984		12		7.0	6.9	6.9	28.0	27.5	27.0					132	498	7.7								34		8		
12	11	1984		1		6.1	6.1	5.9	29.0	29.0	29.0							7.7										18		
12	11	1984		2		5.8	5.6	5.5	29.0	29.0	29.0							7.6										14		
12	11	1984		3		6.2	6.0	5.9	28.8	29.0	29.0							7.8										10		
12	11	1984		4		5.7	5.4	5.2	29.0	29.0	29.0							8.0										12		

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
XX	XX	XXXX	Y or N		XXXX	mg/l XX.X	mg/l XX.X	mg/l XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	deg C XX.X	mg/l CaCO3 XXX	mg/l CaCO3 XXX	XX.X	mg/l X.XX	mg/l X.XX	mg/l X.XX	mg/l X.XX	mg/l XX.XX	mg/l X.XX	mg/l X.XX	cm XX	cm XX	mg/m3 XXXX	mg/m3 XXXX	mg/m3 XXXX
12	11	1984		5		5.7	5.5	5.3	30.0	29.0	29.0							7.6												
12	11	1984		6		6.5	6.3	6.3	28.8	28.8	28.8							8.0										13		
12	11	1984		7		6.6	6.5	6.3	28.0	28.0	28.0							8.0										16		
12	11	1984		8		6.4	6.3	6.2	28.2	28.2	28.5							7.8										23		
12	11	1984		9		6.7	6.6	6.6	28.5	28.5	28.5							7.9										14		
12	11	1984		10		6.5	6.2	5.8	28.0	28.0	28.0							8.0										13		
12	11	1984		11		5.3	5.0	4.8	28.1	28.1	28.1							7.6										12		
12	11	1984		12		5.9	5.6	5.1	28.8	28.8	28.8							7.7										20		
15	11	1984		1												140	572			0.35		0.01		0.03	0.03			8		
15	11	1984		2												122	640			0.00		0.00		0.02	0.02					
15	11	1984		3												126	560			0.35		0.00		0.06	0.01					
15	11	1984		4												130	512			0.00		0.00		0.03	0.01					
15	11	1984		5												146	584			0.48		0.00		0.07	0.01					
15	11	1984		6												148	612			0.00		0.00		0.05						
15	11	1984		7												114	624			0.00		0.00		0.07	0.01					
15	11	1984		8												118	680			0.11		0.00		0.04	0.01					
15	11	1984		9												132	536			0.00		0.00		0.04						
15	11	1984		10												142	460			0.00		0.00		0.04	0.02					
15	11	1984		11												134	496			0.24		0.00		0.03	0.02					
15	11	1984		12												130	576			0.00		0.00		0.10	0.01					
19	11	1984		1		6.5	6.5	6.4	31.0	30.5	30.1					120	536	8.1								48		4		
19	11	1984		2		5.8	5.6	5.5	31.0	30.5	30.0					120	622	8.1								51		3		
19	11	1984		3		6.0	5.8	5.8	30.1	30.0	30.0					124	532	8.0								33		3		
19	11	1984		4		6.1	5.9	5.8	30.8	30.2	30.0					122	470	8.1								50		3		
19	11	1984		5		5.8	5.4	5.2	30.8	30.5	30.0					136	498	8.1								44		4		
19	11	1984		6		5.9	5.7	5.5	30.3	30.2	30.0	32.0	31.0	25.5	26.0	116	516	8.1								42		5		
19	11	1984		7		6.2	5.9	5.8	30.0	30.0	30.0	33.0	31.0	24.0	26.0	124	506	8.1								43		3		
19	11	1984		8		6.6	6.4	6.3	30.0	30.0	30.0					116	582	8.1								48		4		
19	11	1984		9		6.4	6.2	6.2	31.0	30.0	30.0					128	436	8.2								44		4		
19	11	1984		10		6.5	6.3	6.2	30.0	30.0	30.0					124	380	8.2								44		3		
19	11	1984		11		5.5	5.4	5.2	30.0	30.0	30.0	32.0		25.0		132	408	8.0								37		4		
19	11	1984		12		6.0	5.8	5.8	30.2	30.0	30.0					128	436	8.0								45		4		
27	11	1984		1		6.8	6.7	6.6	23.0	23.0	23.0					132	600	8.0										14		
27	11	1984		2		5.7	5.5	5.5	22.5	22.5	22.5					132	716	7.7										20		
27	11	1984		3		6.4	6.4		24.0	24.0	24.0					134	624	7.8										25		
27	11	1984		4		6.8	6.7	6.7	24.5	24.5	24.5					124	556	8.0										12		
27	11	1984		5		5.9	5.8	5.8	23.0	22.0	22.0					152	632	7.7										12		
27	11	1984		6		6.6	6.5	6.4	23.0	23.0	23.0	33.0	32.0	27.0	26.0	128	664	7.9										29		
27	11	1984		7		6.9	6.8	6.8	26.0	26.0	26.0	33.0	32.0	27.0	26.0	130	696	7.9										16		
27	11	1984		8		6.6	6.6	6.5	24.0	24.0	24.0					124	752	8.2										18		
27	11	1984		9		6.2	6.1	6.0	25.0	25.0	25.0					134	588	8.1										9		
27	11	1984		10		5.7	5.6	5.6	26.0	26.0	26.0					136	576	8.0										21		
27	11	1984		11		5.7	5.7	5.6	26.0	26.0	26.0	33.0	32.0	27.0	26.0	140	624	7.9										10		
27	11	1984		12		6.4	6.3	6.3	25.0	25.0	25.0					122	612	8.1										9		
4	12	1984		1		6.6	6.5	6.4	24.5	24.5	24.5					134	640	8.1								46		11		
4	12	1984		2		5.9	5.8	5.7	25.0	25.0	25.0					132	764	7.8								39		15		
4	12	1984		3		6.3	6.2	6.0	24.6	24.6	24.6					124	684	8.0								36		28		
4	12	1984		4		6.6	6.6	6.6	24.5	24.5	24.5					134	588	8.2								51		14		
4	12	1984		5		6.4	6.3	6.2	25.0	25.0	25.0					152	658	7.9								39		14		

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
						mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l CaCO3	mg/l CaCO3		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	mg/m3	mg/m3	mg/m3
XX	XX	XXXX	Y or N		XXXX	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
4	12	1984		6		6.4	6.4	6.3	24.8	24.6	24.5	30.0	27.0	26.0	22.0	134	720	7.8								38		21		
4	12	1984		7		6.8	6.6	6.5	24.0	24.0	24.0	31.5	31.5	23.5	22.5	124	724	7.9								34		24		
4	12	1984		8		6.8	6.7	6.7	24.2	24.2	24.2					130	784	7.8								40		27		
4	12	1984		9		6.6	6.4	6.1	25.0	25.0	25.0					134	616	7.8								34		11		
4	12	1984		10		6.7	6.6	6.6	24.0	24.0	24.0					144	576	7.8								34		28		
4	12	1984		11		6.1	6.0	6.0	24.0	24.0	24.0	31.5	31.5	21.5	21.0	132	680	7.7								33		24		
4	12	1984		12		6.1	6.0	6.0	24.0	24.0	24.0					134	644	7.6								34		18		
12	12	1984		1		6.0	5.6	5.5	25.8	25.8	25.8					134	672	7.9								42		18		
12	12	1984		2		5.5	5.4	5.4	27.0	27.0	27.0					130	680	8.0								35		11		
12	12	1984		3			6.1	6.2		26.0	26.0					124	608	8.0										26		
12	12	1984		4		6.5	6.4	6.4	26.0	26.0	26.0					142	576	8.2								40		14		
12	12	1984		5		5.4	5.3	5.3	26.0	26.0	26.0					150	552	7.8								29		24		
12	12	1984		6			6.2	6.1		26.0	26.0	32.0	31.0	26.0	25.5	132	616	8.3								32		16		
12	12	1984		7		6.8	6.7	6.6	25.0	25.0	25.0	32.0	31.0	26.0	25.5	128	712	8.5								27		26		
12	12	1984		8		7.6	7.4	7.3	26.5	26.5	26.5					124	728	8.7								35		26		
12	12	1984		9			6.2	6.1		26.0	26.0					136	532	8.2								37		24		
12	12	1984		10		6.1	5.9	5.9	26.5	26.5	26.5					142	480	8.0								25		25		
12	12	1984		11		5.4	5.4	5.2	26.0	26.0	26.0	32.0	31.0	26.0	25.5	130	520	7.8								26		20		
12	12	1984		12		6.1	5.9	5.9	26.0	26.0	26.0					132	540	8.0								34		14		
15	12	1984		1												126	707			0.20		0.00		0.07	0.01					
15	12	1984		2												148	608			0.12		0.00		0.08	0.01					
15	12	1984		3												136	752			0.11		0.00		0.08	0.00					
15	12	1984		4												136	664			0.06		0.00		0.07	0.00					
15	12	1984		5												156	720			0.10		0.00		0.08	0.00					
15	12	1984		6												132	780			0.08		0.00		0.07	0.00					
15	12	1984		7												118	764			0.08		0.00		0.08	0.00					
15	12	1984		8												144	844			0.16		0.00		0.08	0.00					
15	12	1984		9												140	692			0.09		0.00		0.07	0.01					
15	12	1984		10												152	612			0.04		0.00		0.08	0.01					
15	12	1984		11												156	712			0.09		0.00		0.07	0.00					
15	12	1984		12												132	668			0.05		0.00		0.06	0.00					
18	12	1984		1		6.3	6.3	6.3	26.0	26.0	26.0					124	740	8.0								41		24		
18	12	1984		2		6.1	5.9	5.8	27.5	27.5	27.5					148	692	8.1								34		17		
18	12	1984		3		6.2	6.1		27.3	27.3						136	768	7.8										21		
18	12	1984		4		6.5	6.4	6.3	27.5	27.5	27.5					148	660	8.0								38		24		
18	12	1984		5		5.8	5.8	5.6	28.0	28.0	28.0					144	712	7.9								35		26		
18	12	1984		6		7.0	6.9	6.8	27.8	27.5	27.5	32.0	32.0	27.5	27.5	124	776	8.1								36		41		
18	12	1984		7		5.9	5.8	5.6	27.3	27.3	27.3	32.0	32.0	27.5	27.5	124	732	8.0								31		19		
18	12	1984		8		6.1	5.9	5.7	27.3	27.3	27.3					116	604	8.0								37		31		
18	12	1984		9		6.2	6.1	6.1	27.0	27.0	27.0					146	584	8.0								33		16		
18	12	1984		10		6.3	6.1	6.1	27.5	27.5	27.5					134	556	8.0								32		36		
18	12	1984		11		6.0	6.0	5.8	27.2	27.2	27.2	32.0	32.0	27.5	27.5	148	596	7.9								35		23		
18	12	1984		12		6.1	5.9	5.9	27.2	27.2	27.2					136	632	7.9								32		14		
25	12	1984		1		7.6	7.6	7.5	21.5	21.5	21.5					144		7.2										14		
25	12	1984		2		7.4	7.3	7.1	22.0	22.0						168		7.6										16		
25	12	1984		3		6.7	6.7		21.0	21.0						152		7.5										25		
25	12	1984		4		6.6	6.4	6.3	22.0	22.0	22.0					140		7.9										22		
25	12	1984		5		6.4	6.2	6.2	22.0	22.0	22.0					164		7.3										18		
25	12	1984		6		7.3	7.2		21.0	21.0		31.0	30.0	23.0	21.0	130		7.5										32		

TABLE 3. Weekly and Twice Weekly Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			EXTRA DATA?	POND	D.O. SAMPLE TIME	OXYGEN			POND TEMP.			MAX TEMP		MIN TEMP		ALKA	T.HARD	pH	KJELDAHL N	AMMONIA N	NO2-N	NO3-N	TOTAL NO2&3-N	TOTAL P	ORTHO PO4-P	S.DISK		CHLOROPHYLL		
DAY	MONTH	YEAR				TOP	MID	BOT	TOP	MID	BOT	TOP	BOT	TOP	BOT											A	B	a	b	c
XX	XX	XXXX	Y or N		XXXX	mg/l	mg/l	mg/l	deg C	deg C	deg C	deg C	deg C	deg C	deg C	mg/l CaCO3	mg/l CaCO3		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	cm	cm	mg/m3	mg/m3	mg/m3
						XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	XX.XX	X.XX	X.XX	XX	XX	XXXX	XXXX	XXXX
25	12	1984		7		7.4	7.3	7.2	22.0	22.0	22.0	31.0	30.0	24.0	21.0	136		8.2												
25	12	1984		8		6.7	6.7	6.7	21.0	21.0	21.0					140		8.1										30		
25	12	1984		9		6.9	6.9		21.0	21.0						148		8.1										17		
25	12	1984		10		7.1	7.1	7.0	21.0	21.0	21.0					156		8.1										17		
25	12	1984		11		6.4	6.4	6.4	21.0	21.0	21.0	32.0	30.0	23.0	21.0	164		7.6										19		
25	12	1984		12		7.1	6.9		21.0	21.0						152		8.4										21		
																												11		

TABLE 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			TIME	POND	OXYGEN			POND TEMP.			pH
DAY	MONTH	YEAR	OF DAY		TOP	MID	BOT	TOP	MID	BOT	
XX	XX	XXXX	XXXX		mg/l XX.X	mg/l XX.X	mg/l XX.X	deg C XX.X	deg C XX.X	deg C XX.X	XX.X
16	8	1984	530	1	5			29.5			7.4
16	8	1984	530	2	3.8						7.2
16	8	1984	530	3	3.5						7.2
16	8	1984	530	4	4.1						7.3
16	8	1984	530	5	3.3						7.1
16	8	1984	530	6	5.6						7.2
16	8	1984	530	7	3.9						7.7
16	8	1984	530	8	3.5						7.1
16	8	1984	530	9	3.7						7.4
16	8	1984	530	10	4						7.2
16	8	1984	530	11	3.4						7.3
16	8	1984	530	12	4						7.3
16	8	1984	930	1	4.8			30			7.6
16	8	1984	930	2	3.6						7.4
16	8	1984	930	3	3.8						7.6
16	8	1984	930	4	3.9						7.7
16	8	1984	930	5	3.4						7.4
16	8	1984	930	6	5.5						7.5
16	8	1984	930	7	3.9						8.2
16	8	1984	930	8	3.7						7.6
16	8	1984	930	9	3.9						7.8
16	8	1984	930	10	3.9						7.7
16	8	1984	930	11	4.3						7.7
16	8	1984	930	12	3.9						7.7
16	8	1984	1400	1	5.2			33.5			7.5
16	8	1984	1400	2	5						7.7
16	8	1984	1400	3	5.1						7.7
16	8	1984	1400	4	5.1						7.8
16	8	1984	1400	5	4.9						7.7
16	8	1984	1400	6	5.5						7.8
16	8	1984	1400	7	7.4						8.3
16	8	1984	1400	8	5.1						7.9
16	8	1984	1400	9	4.9						7.9
16	8	1984	1400	10	4.8						7.9
16	9	1984	1400	11	5						7.9
16	8	1984	1400	12	4.6						7.9
16	8	1984	1900	1	6.6			32			7.6
16	8	1984	1900	2	6.2						7.7
16	8	1984	1900	3	5.6						7.6
16	8	1984	1900	4	5.2						7.7
16	8	1984	1900	5	5.4						7.7
16	8	1984	1900	6	5.5						7.7
16	8	1984	1900	7	8.1						8.2
16	8	1984	1900	8	5.7						7.6
16	8	1984	1900	9	5.2						7.2
16	8	1984	1900	10	5.1						7.6
16	8	1984	1900	11	5.9						7.8
16	8	1984	1900	12	5.2						7.7
16	8	1984	2400	1	5.5			31			7.5
16	8	1984	2400	2	4.6						7.3
16	8	1984	2400	3	4.5						7.2
16	8	1984	2400	4	4.9						7.4
16	8	1984	2400	5	4.6						7.3
16	8	1984	2400	6	4.6						7.2
16	8	1984	2400	7	6.6						7.9
16	8	1984	2400	8	5.3						7.4
16	8	1984	2400	9	4.6						7.5
16	8	1984	2400	10	4.7						7.3
16	8	1984	2400	11	4.9						7.4
16	8	1984	2400	12	4.5						7.3
17	8	1984	400	1	4.7			30			7.5
17	8	1984	400	2	4.5						7.3
17	8	1984	400	3	4						7.3
17	8	1984	400	4	4.4						7.4
17	8	1984	400	5	4						7.3
17	8	1984	400	6	4.1						7.4
17	8	1984	400	7	6						7.8
17	8	1984	400	8	4.5						7.3
17	8	1984	400	9	4.4						7.5
17	8	1984	400	10	4.4						7.3
17	8	1984	400	11	4.6						7.4
17	8	1984	400	12	4.2						7.3
18	9	1984	530	1	5.1	5	5	29.1		29	7.3
18	9	1984	530	2	4.5	4.4	4.4	29.7	29.7	29.7	7.5
18	9	1984	530	3	3.7	3.6	3.6	29	29	29	7.4
18	9	1984	530	4	5.4	5.4	5.4	28.7	28.7	28.7	7.5
18	9	1984	530	5	3.8	3.8	3.8	29.7	29.6	29.6	7.4
18	9	1984	530	6	4.2	4.1	4.1	29	29	29	7.4
18	9	1984	530	7	4.8	4.7	4.6	28.6	28.6	28.6	7.4
18	9	1984	530	8	4.7	4.7	4.7	28.9	28.9	28.9	7.5
18	9	1984	530	9	4.3	4.2	4.2	28.9	28.9	28.9	7.5
18	9	1984	530	10	4.6	4.6	4.6	28.8	28.8	28.8	7.5
18	9	1984	530	11	4	4	4	28.7	28.7	28.7	7.5
18	9	1984	530	12	4.4	4.4	4.3	28.8	28.8	28.8	7.5
18	9	1984	930	1	6.7		6.2	29.9		29.3	7.6
18	9	1984	930	2	5.6	5.7	5.6	30.3	30.1	29.9	7.7
18	9	1984	930	3	4.4	4.4	4.4	30.1	30	30	7.5
18	9	1984	930	4	6.8	6.8	6.5	30	29.9	29.7	7.9
18	9	1984	930	5	5.8	5.5	4.8	30.3	29.9	29.7	7.7
18	9	1984	930	6	5.4	5.2	4.8	30.2	29.9	29.8	7.6
18	9	1984	930	7	6.5	6.4	6	30	29.7	29.5	7.7
18	9	1984	930	8	5.8	5.8	5.6	30	29.9	29.7	7.8
18	9	1984	930	9	5.9	5.8	5.4	30.2	29.9	29.8	7.8
18	9	1984	930	10	6.1	6	5.4	30.1	29.9	29.7	7.8
18	9	1984	930	11	5.4	5.2	4.8	30	29.8	29.7	7.8
18	9	1984	930	12	5.6	5.4	4.9	30.1	29.8	29.7	7.9
18	9	1984	1400	1	8.7		9.1	32.7		31.1	8
18	9	1984	1400	2	8	8.2	9.3	32.5	32.1	31.7	8

TABLE 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			TIME OF DAY	POND	OXYGEN			POND TEMP.			pH
DAY XX	MONTH XX	YEAR XXXX	XXXX		TOP mg/l XX.X	MID mg/l XX.X	BOT mg/l XX.X	TOP deg C XX.X	MID deg C XX.X	BOT deg C XX.X	XX.X
18	9	1984	1400	3	6.4	6.3	6.3	33.1	32.1	31.9	7.8
18	9	1984	1400	4	9	9.2	9.3	32.8	31.6	31	8.2
18	9	1984	1400	5	8.5	8.7	8	32.9	31.6	30.8	8
18	9	1984	1400	6	7.6	7.8	7.3	33.2	31.7	31.2	7.9
18	9	1984	1400	7	8.8	9.4	8.9	33	31.5	30.8	8
18	9	1984	1400	8	7.8	7.7	7.5	33	32	31.1	8
18	9	1984	1400	9	8.2	8.2	7.2	33.3	31.2	30.7	8
18	9	1984	1400	10	8.3	8.6	7.6	33.1	31.6	30.6	8
18	9	1984	1400	11	7.4	7	6.4	33.3	32.1	31.4	7.8
18	9	1984	1400	12	7.6	7.4	7	33.2	31.7	30.9	8
18	9	1984	1900	1	8.5		8.4	31.6		31.6	7.9
18	9	1984	1900	2	8.4	8.4	8.4	31.8	31.8	31.8	7.9
18	9	1984	1900	3	6.4	6.4	6.4	32.2	32.2	32.2	7.7
18	9	1984	1900	4	9.4	9.3	9.4	31.8	31.6	31.4	8.1
18	9	1984	1900	5	8.5	8.4	7.5	31.9	31.8	31.4	7.9
18	9	1984	1900	6	8	8.1	7.8	32.2	32.1	31.9	7.8
18	9	1984	1900	7	9.2	9.2	9	32.1	31.7	31	8
18	9	1984	1900	8	8	8	7.8	31.9	31.9	31.5	7.9
18	9	1984	1900	9	8.4	8.4	7	32.2	32.1	31.4	8
18	9	1984	1900	10	8.6	8.6	8.6	31.9	31.8	31.1	8
18	9	1984	1900	11	7.2	6.9	6.1	32	32	31.6	7.8
18	9	1984	1900	12	7.6	7.6	6.8	32	32	31.6	7.9
18	9	1984	2400	1	6.8		6.7	30.4		30.4	7.8
18	9	1984	2400	2	6.5	6.4	6.4	30.8	30.9	30.9	7.7
18	9	1984	2400	3	4.8	4.8	4.8	31	31	31	7.4
18	9	1984	2400	4	7.1	7	7.1	30.5	30.6	30.6	7.8
18	9	1984	2400	5	5.4	5.4	5.4	30.5	30.6	30.6	7.4
18	9	1984	2400	6	5.6	5.5	5.5	31	31	31	7.5
18	9	1984	2400	7	6.6	6.6	6.6	30.4	30.4	30.4	7.6
18	9	1984	2400	8	6	6	6	30.7	30.8	30.8	7.6
18	9	1984	2400	9	5.7	5.8	5.7	30.8	30.8	30.8	7.6
18	9	1984	2400	10	6	5.9	5.9	30.5	30.5	30.5	7.6
18	9	1984	2400	11	5.3	5.2	5.2	30.8	30.8	30.8	7.5
18	9	1984	2400	12	5.6	5.6	5.5	30.8	30.8	30.8	7.6
19	9	1984	400	1	6		5.9	29.7		29.7	7.6
19	9	1984	400	2	5.6	5.5	5.4	30.1	30	30	7.6
19	9	1984	400	3	4.2	4.2	4.2	29.7	29.7	29.7	7.3
19	9	1984	400	4	6.3	6.2	6.2	29.9	29.9	29.9	7.8
19	9	1984	400	5	4.6	4.6	4.6	29.9	29.9	29.9	7.4
19	9	1984	400	6	4.9	4.8	4.8	29.7	29.7	29.6	7.4
19	9	1984	400	7	5.9	5.8	5.8	30	30	30	7.4
19	9	1984	400	8	5.5	5.4	5.4	29.4	29.4	29.4	7.5
19	9	1984	400	9	5	5	4.9	29.4	29.5	29.5	7.4
19	9	1984	400	10	5.3	5.2	5.2	29.4	29.4	29.4	7.5
19	9	1984	400	11	4.4	4.7	4.6	29.5	29.5	29.5	7.5
19	9	1984	400	12	5	4.9	4.8	29.6	29.6	29.6	7.5
15	10	1984	530	1	6.1	6	6	27.8	27.8	27.8	7.4
15	10	1984	530	2	5.4	5.4	5.4	28.5	28.5	28.5	7.3
15	10	1984	530	3	5	5.1	5.1	28	28	28	7.3
15	10	1984	530	4	4.7	4.9	4.9	27.5	27.5	27	7.2
15	10	1984	530	5	4.9	4.9	4.9	28	28	28	7.3
15	10	1984	530	6	5.8	5.9	5.9	28	28	28	7.5
15	10	1984	530	7	5.4	5.4	5.4	28	28	28	7.4
15	10	1984	530	8	5.2	5.3	5.5	28.5	28.5	28.5	7.4
15	10	1984	530	9	5.4	5.4	5.1	28	28	28	7.4
15	10	1984	530	10	4.4	4.7	4.7	28	28	28	7.4
15	10	1984	530	11	5.1	5.2	5.2	28	28	28	7.1
15	10	1984	530	12	5.3	5.4	5.3	28	28	28	7.3
15	10	1984	930	1	6.3	6.1	6	28.7	28.5	28.5	7.6
15	10	1984	930	2	5.8	5.8	5.8	28.8	28.5	28.5	7.7
15	10	1984	930	3	5.5	5.4	5.4	28.5	28.2	28.1	7.7
15	10	1984	930	4	4.6	4.3	4.1	28.5	28.3	28.2	7.8
15	10	1984	930	5	5.5	5.4	5.2	28.8	28.3	28.2	7.8
15	10	1984	930	6	6.2	6.2	6.1	28.3	28.3	28.3	8
15	10	1984	930	7	6.4	6.3	6	28.9	28.5	28.2	8
15	10	1984	930	8	5.9	5.8	5.8	29.5	29	29	7.7
15	10	1984	930	9	5.5	5.5	5.4	28.3	28.3	28.1	7.7
15	10	1984	930	10	5.2	5.3	5.2	29	28.5	28.5	7.9
15	10	1984	930	11	5.8	5.3	4.7	28.5	28.3	28.3	7.4
15	10	1984	930	12	5.3	5.2	5	28.3	28.3	28	7.6
15	10	1984	1400	1	9.2	9.7	9.5	32.2	31	30	8
15	10	1984	1400	2	8.8	8.6	8.5	31.5	31	30	8
15	10	1984	1400	3	7.7	8.3	8.2	31.9	30.2	30	7.9
15	10	1984	1400	4	8.3	8.2	7.5	32	30.5	30	8
15	10	1984	1400	5	8.3	8.2	7.9	32	30.5	30	8
15	10	1984	1400	6	8.3	8	7.9	31	30	29	8.1
15	10	1984	1400	7	9.5	10.5	9.8	32	30	29.5	8.3
15	10	1984	1400	8	8	7.8	7.8	31.5	31	30	8
15	10	1984	1400	9	7.9	7.7	7.3	32	30	30	8
15	10	1984	1400	10	7.7	7.5	7.5	32	30	29.8	8.2
15	10	1984	1400	11	7.2	7.1	7	32	31	30	7.6
15	10	1984	1400	12	8.2	8	7.9	31.5	31	30	7.8
15	10	1984	1900	1	9.2	9.5	9.5	31.2	30.8	30.8	7.9
15	10	1984	1900	2	8.7	8.9	8.9	31	31	31	7.9
15	10	1984	1900	3	8.2	8.2	8	31.5	31.5	31	7.4
15	10	1984	1900	4	8.4	8.4	8.2	31.5	32	31	8
15	10	1984	1900	5	8.6	8.6	8.5	31.1	31.1	30	7.9
15	10	1984	1900	6	8.5	8.5	8.5	31.2	31.2	31.2	8
15	10	1984	1900	7	9.4	9.8	9.6	31	31	30	8.2
15	10	1984	1900	8	8	9	9	32	31.5	30	7.7
15	10	1984	1900	9	7.9	8	8	31	31	31	7.9
15	10	1984	1900	10	8.8	9.2	9.2	31	31	30.5	8
15	10	1984	1900	11	8	8	6.5	31.8	31	30	7.5
15	10	1984	1900	12	7.9	7.9	7.8	31.5	31.5	30	7.7
15	10	1984	2400	1	6.7	6.7	6.7	29.5	29.5	29.5	7.2
15	10	1984	2400	2	6.5	6.5	6.5	29	29	29.9	7
15	10	1984	2400	3	6.2	6.2	6.2	29	29	29.9	6.9
15	10	1984	2400	4	6	6	6	29.9	29.9	29.9	7

TABLE 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			TIME OF DAY	POND	OXYGEN			POND TEMP.			pH
DAY	MONTH	YEAR			TOP	MID	BOT	TOP	MID	BOT	
					mg/l	mg/l	mg/l	deg C	deg C	deg C	
XX	XX	XXXX	XXXX		XX.X	XX.X	XX.X	XX.X	XX.X	XX.X	XX.X
15	10	1984	2400	5	6.1	6.1	6.2	29.2	29.2	29.5	7
15	10	1984	2400	6	6	6	6	29.8	29.8	29.8	7.1
15	10	1984	2400	7	7.2	7.2	7.2	29.1	29.1	29.1	7.1
15	10	1984	2400	8	6.5	6.5	6.6	29.9	29.9	29.9	7
15	10	1984	2400	9	6.2	6.3	6.3	29.5	29.5	29.5	7
15	10	1984	2400	10	6.6	6.6	6.6	29.1	29.1	29.1	7.1
15	10	1984	2400	11	5	5.5	5.6	29.2	29.2	29.2	6.7
15	10	1984	2400	12	6.3	6.4	6.4	29.8	29.8	29.8	6.8
16	10	1984	400	1	6.1	6.1	6.1	29	29	29	6.8
16	10	1984	400	2	6	6	6	29.2	29.2	29.2	7.1
16	10	1984	400	3	5.6	5.6	5.6	29.1	29.1	29.1	6.9
16	10	1984	400	4	5.2	5.2	5.2	29.2	29.2	29.2	6.8
16	10	1984	400	5	5.4	5.4	5.5	29.1	29.1	29.1	6.9
16	10	1984	400	6	5.9	5.9	5.9	29.1	29.1	29.1	7
16	10	1984	400	7	6.4	6.4	6.3	29	29	29	7.1
16	10	1984	400	8	6	5.9	5.9	29	29	29.2	7
16	10	1984	400	9	5.9	5.8	5.8	29	29	29	7
16	10	1984	400	10	5.9	5.8	5.9	29	29	29	7.1
16	10	1984	400	11	5	5.2	5.2	29	29	29	6.7
16	10	1984	400	12	5.8	5.8	5.9	29	29	29	6.8
15	11	1984	530	1	5.6	5.6	5.5	29	29	29	7.4
15	11	1984	530	2	5.4	5.3	5.3	29.9	29.9	29.9	7.7
15	11	1984	530	3	4.6	4.5	4.1	29	29	29	7.6
15	11	1984	530	4	5.3	5.3	5.2	29	29	29	7.8
15	11	1984	530	5	5.2	5.2	5.2	29	29	29	7.7
15	11	1984	530	6	5.5	5.4	5.1	29	29	29	7.8
15	11	1984	530	7	5.6	5.5	5.5	28.9	28.9	28.9	8
15	11	1984	530	8	5.7	5.6	5.5	28	28	28	7.9
15	11	1984	530	9	5.8	5.8	5.7	29	29	29	8.1
15	11	1984	530	10	5.2	5.1	5.1	28.9	28.9	28.9	8
15	11	1984	530	11	4.7	4.6	4.5	28.9	28.9	28.9	7.9
15	11	1984	530	12	5.4	5.4	5.3	29	29	29	8
15	11	1984	930	1	6.2	6.1	6	30	30	29.8	7.8
15	11	1984	930	2	6.4	6.2	6	30	30	29.8	8.1
15	11	1984	930	3	5.6	5.2	4.2	30	30	29.8	8.3
15	11	1984	930	4	6.4	6.2	5.9	30	30	29.8	8
15	11	1984	930	5	6.1	5.9	5.7	30	30	29.8	7.8
15	11	1984	930	6	6.6	6.4	6.4	30	30	29.9	7.8
15	11	1984	930	7	7.1	6.8	6.7	29.9	29.8	29.2	7.7
15	11	1984	930	8	6.8	6.7	6.6	30	29.9	29.5	7.6
15	11	1984	930	9	6.5	6.2	6.1	30	30	29.8	7.8
15	11	1984	930	10	6.1	6.3	6.4	29.9	29.8	29	7.8
15	11	1984	930	11	5.5	5.3	5.1	29.9	29.3	29	7.4
15	11	1984	930	12	5.5	5.6	6.2	30	30	29.2	7.7
15	11	1984	1400	1	10.8	10.4	10.4	38	37	36	8
15	11	1984	1400	2	8.6	8.5	8.4	33	32	31.5	8
15	11	1984	1400	3	9.5	9.4	8.5	33	32.5	32	8
15	11	1984	1400	4	10.8	10.4	10.2	33	32	31.5	8.1
15	11	1984	1400	5	9	8.5	8.4	33	32	31.5	8
15	11	1984	1400	6	9.1	10.6	10.6	33	32	32	8.1
15	11	1984	1400	7	10.2	9.9	9.4	32	31.5	31	8.4
15	11	1984	1400	8	9	8.9	8.9	33	32	31.5	8
15	11	1984	1400	9	9.8	9.3	8.9	33	32.5	31.5	8
15	11	1984	1400	10	8.9	8.8	8.7	33	32.5	31.5	8.2
15	11	1984	1400	11	7.5	7.1	7	33	32	31.5	8
15	11	1984	1400	12	9	8.9	8.8	33	32	31.5	8.1
15	11	1984	1900	1	8.8	8.5	8.4	32	32	32	8.1
15	11	1984	1900	2	8.3	8.2	8.1	31	31	31	7.9
15	11	1984	1900	3	7.9	7.8	7.3	31	31	31	7.8
15	11	1984	1900	4	9.5	9.3	9.2	31.5	31.5	31.5	8.2
15	11	1984	1900	5	8.6	8.5	8.1	31	31	31	8
15	11	1984	1900	6	8.9	8.6	8.3	31.1	31.1	31.1	8.1
15	11	1984	1900	7	8.6	8.6	8.5	30	30	30	7.9
15	11	1984	1900	8	9.4	9.3	9.2	31	31	31	7.8
15	11	1984	1900	9	8.6	8.5	8.4	31.3	31.3	31.3	7.9
15	11	1984	1900	10	8.1	8	7.9	30	30	30	8
15	11	1984	1900	11	7.8	7.2	6.6	30	30	30	7.7
15	11	1984	1900	12	8	7.9	7.8	31.2	31.2	31.2	7.8
15	11	1984	2400	1	7.9	7.7	7.6	29.2	29.2	29.2	7.5
15	11	1984	2400	2	7.7	7.6	7.4	29	29	29	7.2
15	11	1984	2400	3	7.3	7.2	7.1	28.9	28.9	28.9	7
15	11	1984	2400	4	8	7.8	7.8	29	29	29	7.3
15	11	1984	2400	5	7.8	7.8	7.5	28.8	28.8	28.8	7.2
15	11	1984	2400	6	7.9	7.6	7.4	28.9	28.9	28.9	7.4
15	11	1984	2400	7	7.7	7.7	7.5	27.8	27.8	27.8	7.1
15	11	1984	2400	8	8.2	8.1	8	28.7	28.7	28.7	7
15	11	1984	2400	9	7.9	7.6	7.6	29.2	29.2	29.2	7.2
15	11	1984	2400	10	7.8	7.7	7.4	27.5	27.5	27.5	7.2
15	11	1984	2400	11	7	6.9	6	27.8	27.8	27.8	6.9
15	11	1984	2400	12	7.5	7.3	7.2	29	29	29	7
16	11	1984	400	1	6.8	6.7	6.6	28.3	28.3	28.3	7
16	11	1984	400	2	6.5	6.5	6.4	27.9	27.9	27.9	6.8
16	11	1984	400	3	6.1	6	6	28.2	28.2	28.2	6.5
16	11	1984	400	4	6.4	6.4	6	28	28	28	6.8
16	11	1984	400	5	6.3	6.2	6.2	27.8	27.8	27.8	6.8
16	11	1984	400	6	6.5	6.3	6.2	27.5	27.5	27.5	6.9
16	11	1984	400	7	6.6	6.4	6.4	27.2	27.2	27.2	6.6
16	11	1984	400	8	6.7	6.5	6.5	27.4	27.4	27.4	6.4
16	11	1984	400	9	6.6	6.4	6.2	27.3	27.3	27.3	6.6
16	11	1984	400	10	6.2	6.1	6	27	27	27	6.9
16	11	1984	400	11	5.4	5.4	5.3	26.9	26.9	26.9	6.4
16	11	1984	400	12	5.6	5.6	5.6	27.1	27.1	27.1	6.4
15	12	1984	530	1	6.5	6.2	6.2	25	26	26	7.4
15	12	1984	530	2	5.7	5.7	5.6	26	25	25	7.5
15	12	1984	530	3	5.6	5.5	5.5	25	25.5	25.5	7.6
15	12	1984	530	4	7.2	7.1	6.9	26	26	26	7.5
15	12	1984	530	5	5.5	5.5	5.5	26	26	26	7.6
15	12	1984	530	6	6.1	6.1	6	25.5	26	26	7.7

TABLE 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			TIME OF DAY	POND	OXYGEN			POND TEMP.			pH
DAY	MONTH	YEAR			TOP	MID	BOT	TOP	MID	BOT	
XX	XX	XXXX	XXXX		mg/l XX.X	mg/l XX.X	mg/l XX.X	deg C XX.X	deg C XX.X	deg C XX.X	XX.X
15	12	1984	530	7	6.5	6.4	6.2	26	26	26	7.8
15	12	1984	530	8	6.9	6.9	6.9	26	26	26	7.9
15	12	1984	530	9	6.1	6.1	6.1	26	26	26	7.9
15	12	1984	530	10	6.6	6.6	6.5	25.5	26	26	7.9
15	12	1984	530	11	5.6	5.6	5.4	25	26	26	7.9
15	12	1984	530	12	6	5.9	5.9	25.5	26	26	8
15	12	1984	930	1	7.1	7.1	7.1	26	26	26	7.6
15	12	1984	930	2	6.4	6.2	6.1	26	26	26	7.4
15	12	1984	930	3	6.9	6.5	6.5	25.5	26	26	7.5
15	12	1984	930	4	8.4	8.3	8.2	26	26	26	7.7
15	12	1984	930	5	5.9	5.6	5.4	26	26	26	7.4
15	12	1984	930	6	7.2	7.1	6.7	26	26	26	7.5
15	12	1984	930	7	7.4	7.2	7	26	26	26	7.4
15	12	1984	930	8	7.5	7	6.6	26	26	26	7.3
15	12	1984	930	9	7.1	7	7	26	26	26	7.5
15	12	1984	930	10	6.8	6.6	6.3	26	26	26	7.6
15	12	1984	930	11	6.1	5.5	4.9	26	26	26	7.5
15	12	1984	930	12	6.4	6.3	6.1	26	26	26	7.4
15	12	1984	1400	1	9.4	10.3	10.2	30	29.5	29	8.1
15	12	1984	1400	2	8.6	8.5	8.5	30	30	29	8.1
15	12	1984	1400	3	11.1	12.1	12	30	29	29	8.7
15	12	1984	1400	4	11	12.2	12.2	29.5	29.5	29	8.4
15	12	1984	1400	5	8.4	8.7	6.5	30	29.5	29	8
1'	12	1984	1400	6	10	11.8	11.6	30	29	29	8.3
15	12	1984	1400	7	10.2	11.1	10	29.5	29	28	8.2
15	12	1984	1400	8	11.1	10.5	10.2	30	28.5	27.5	8.3
15	12	1984	1400	9	9.6	9.6	9.3	30	29.5	29	8.2
15	12	1984	1400	10	9.9	9.5	9.4	29.5	29	28.5	8.7
15	12	1984	1400	11	8.1	7.5	6.7	30	29.5	28	8.1
15	12	1984	1400	12	8.2	8.6	8.5	30	30	29.5	8
15	12	1984	1900	1	9.3	10	10	28	28	27.5	7.8
15	12	1984	1900	2	8.5	8.4	8.4	28	28	28	7.7
15	12	1984	1900	3	10.8	10.8	10.8	28.2	28	28	7.3
15	12	1984	1900	4	10.6	10.9	10.9	28	28	28	7.5
15	12	1984	1900	5	8.2	8.4	8.3	28.1	28.1	28.1	7.4
15	12	1984	1900	6	9.7	9.6	9.6	28	28	27.8	7.2
15	12	1984	1900	7	9.8	9.8	9.6	28	28	27.9	7.6
15	12	1984	1900	8	9.9	9.7	9.7	28	28	28	7.5
15	12	1984	1900	9	9.2	9.1	9	28.3	28.1	28	7.8
15	12	1984	1900	10	9.3	9.2	9.1	28	28	27.5	7.5
15	12	1984	1900	11	7.8	7	6.5	28.2	28	27.6	7.3
15	12	1984	1900	12	7.8	7.8	7.8	28	28	28	7.4
15	12	1984	2400	1	7.2	7	7	27.8	27.8	27.4	7.4
15	12	1984	2400	2	7	7	7	27.6	27.6	27.6	7.2
15	12	1984	2400	3	7.3	7.2	7.2	27.9	27.8	27.8	7.3
15	12	1984	2400	4	7.4	7.4	7.3	28	27.8	27.7	7.3
15	12	1984	2400	5	6.9	6.9	6.9	28	28	28	7.2
15	12	1984	2400	6	7.2	7.1	7.1	28	27.9	27.7	7.2
15	12	1984	2400	7	7.4	7.2	7.1	27.9	27.9	27.9	7.4
15	12	1984	2400	8	7.8	7.6	7.6	28	28	28	7.4
15	12	1984	2400	9	7	7	6.9	28	28	27.9	7.4
15	12	1984	2400	10	7.1	7	7	27.5	27.5	27.4	7.3
15	12	1984	2400	11	6.8	6.8	6.7	28	27.9	27.4	7.2
15	12	1984	2400	12	6.7	6.6	6.6	27.8	27.8	27.8	7.3
16	12	1984	400	1	6.6	6.5	6.5	25	25	25	6.9
16	12	1984	400	2	5.9	5.9	5.9	25.5	25.5	25.5	7
16	12	1984	400	3	5.8	5.6	5.5	25	24.5	24.5	7
16	12	1984	400	4	7.2	7.2	7.1	25	25	25	o.9
16	12	1984	400	5	5.8	5.7	5.7	25.5	25	25	7.1
16	12	1984	400	6	6.3	6.3	6.3	25	24.5	24.5	7.2
16	12	1984	400	7	6.6	6.5	6.3	25.5	25	25	7.2
16	12	1984	400	8	7.1	7	7	25	25	25	7.2
16	12	1984	400	9	6.2	6.2	6.1	25	25	25	7.2
16	12	1984	400	10	6.8	6.7	6.7	25.5	25	25	7.2
16	12	1984	400	11	5.9	5.8	5.7	25	25	25	7.2
16	12	1984	400	12	6.3	6	6	25.5	25	25	7.2

TABLE 5.

Fish/Shrimp Stocking, Sampling and Harvest. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	ACTIVITY CODE	SPECIES CODE	WHOLE POPULATION		SAMPLE WEIGHT (g)			SAMPLE LENGTH (cm)			REPRODUCTION	
DAY XX	MONTH XX	YEAR XXXX				WT.(kg) XXXX.X	No.	MEAN XXX	No.	S. DEV XXX.X	MEAN XX.X	No.	S. DEV XX.XX	WT.(kg) XXX.X	No.
1	08	1984	1	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	2	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	3	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	4	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	5	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	6	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	7	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	8	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	9	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	10	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	11	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
1	08	1984	12	STK	nil	5.8	250	23	300	84.0	10.7	300	1.33		
31	08	1984	1	SAM	nil			40	25	8.9	13.2	25	0.88		
31	08	1984	2	SAM	nil			41	25	7.9	13.4	25	0.84		
31	08	1984	3	SAM	nil			38	25	6.9	13.0	25	0.88		111
31	08	1984	4	SAM	nil			41	25	7.7	13.5	25	0.74		
31	08	1984	5	SAM	nil			39	25	7.2	13.4	25	0.80		
31	08	1984	6	SAM	nil			39	25	7.0	13.1	25	0.71		96
31	08	1984	7	SAM	nil			41	25	8.7	13.3	25	0.85		70
31	08	1984	8	SAM	nil			42	25	9.3	13.5	25	0.99		
31	08	1984	9	SAM	nil			45	25	8.2	13.6	25	0.90		157
31	08	1984	10	SAM	nil			42	25	9.5	13.5	25	0.67		
31	08	1984	11	SAM	nil			45	25	10.2	13.5	25	1.05		
31	08	1984	12	SAM	nil			46	25	9.5	13.6	25	1.02		
1	10	1984	1	SAM	nil			48	25	10.3	14.0	25	0.98		151
1	10	1984	2	SAM	nil			49	25	9.8	13.9	25	0.88		130
1	10	1984	3	SAM	nil			42	25	11.8	13.4	25	1.05		620
1	10	1984	4	SAM	nil			48	25	9.4	14.0	25	0.72		304
1	10	1984	5	SAM	nil			50	25	8.9	14.1	25	0.67		3
1	10	1984	6	SAM	nil			55	25	8.6	13.8	25	0.68		500
1	10	1984	7	SAM	nil			52	25	10.3	14.2	25	1.18		120
1	10	1984	8	SAM	nil			45	25	6.1	13.9	25	0.71		123
1	10	1984	9	SAM	nil			50	25	8.7	14.1	25	0.87		515
1	10	1984	10	SAM	nil			52	25	7.1	14.0	25	0.74		210
1	10	1984	11	SAM	nil			45	25	9.1	13.8	25	0.82		15
1	10	1984	12	SAM	nil			52	25	9.4	14.1	25	0.80		215
31	10	1984	1	SAM	nil			60	25	12.1	15.0	25	0.82		44
31	10	1984	2	SAM	nil			63	25	10.6	15.1	25	0.65		15
31	10	1984	3	SAM	nil			51	25	9.6	13.9	25	0.94		20
31	10	1984	4	SAM	nil			69	25	9.9	15.3	25	0.60		209
31	10	1984	5	SAM	nil			59	25	12.2	14.8	25	0.70		30
31	10	1984	6	SAM	nil			56	23	10.4	14.1	25	0.82		205
31	10	1984	7	SAM	nil			70	25	8.5	15.5	25	0.61		23
31	10	1984	8	SAM	nil			50	25	7.4	14.0	25	0.63		66
31	10	1984	9	SAM	nil			60	25	9.2	14.3	25	0.87		75
31	10	1984	10	SAM	nil			57	25	12.3	14.7	25	0.93		21
31	10	1984	11	SAM	nil			55	25	9.3	14.6	25	0.81		5
31	10	1984	12	SAM	nil			52	25	13.5	14.3	25	1.00		30
30	11	1984	1	SAM	nil			62	25	12.2	15.0	25	0.85		50

TABLE 5.

Fish/Shrimp Stocking, Sampling and Harvest. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	ACTIVITY CODE	SPECIES CODE	WHOLE POPULATION		SAMPLE WEIGHT (g)			SAMPLE LENGTH (cm)			REPRODUCTION	
DAY XX	MONTH XX	YEAR XXXX				WT.(kg) XXXX.X	No.	MEAN XXX	No.	S. DEV XXX.X	MEAN XX.X	No.	S. DEV XX.XX	WT.(kg) XXX.X	No.
30	11	1984	2	SAM	nil			65	25	10.2	15.4	25	0.69		
30	11	1984	3	SAM	nil			59	25	8.0	14.9	25	0.65		375
30	11	1984	4	SAM	nil			74	25	10.7	16.0	25	0.66		42
30	11	1984	5	SAM	nil			71	25	10.1	15.8	25	0.73		4
30	11	1984	6	SAM	nil			58	25	9.6	14.6	25	0.72		158
30	11	1984	7	SAM	nil			79	25	11.5	16.4	25	0.75		30
30	11	1984	8	SAM	nil			62	25	11.1	15.1	25	0.98		51
30	11	1984	9	SAM	nil			60	25	9.7	15.2	25	1.09		122
30	11	1984	10	SAM	nil			70	25	13.1	15.5	25	1.17		5
30	11	1984	11	SAM	nil			60	25	8.8	14.9	25	0.76		10
30	11	1984	12	SAM	nil			56	25	7.2	14.8	25	0.59		30
4	01	1985	1	HAR	nil	17.0	216	62	25	12.2	15.3	25	0.83		
4	01	1985	2	HAR	nil	13.8	224	72	25	10.9	16.2	25	0.64		
4	01	1985	3	HAR	nil	15.3	233	63	25	7.6	15.1	25	0.76		
4	01	1985	4	HAR	nil	19.0	238	81	25	10.8	16.7	25	0.90		
4	01	1985	5	HAR	nil	14.8	221	79	25	9.4	16.8	25	0.59		
4	01	1985	6	HAR	nil	15.0	235	61	25	8.8	15.2	25	0.80		
4	01	1985	7	HAR	nil	17.6	231	78	25	7.8	16.6	25	0.65		
4	01	1985	8	HAR	nil	17.2	212	76	25	10.0	16.3	25	0.87		
4	01	1985	9	HAR	nil	13.7	228	69	25	9.0	15.8	25	0.73		
4	01	1985	10	HAR	nil	16.2	193	74	25	11.8	16.3	25	0.80		
4	01	1985	11	HAR	nil	15.0	230	68	25	6.8	15.7	25	0.69		
4	01	1985	12	HAR	nil	11.2	189	63	25	12.9	15.2	25	0.83		

TABLE 6.

Plankton and Benthos. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	PRIMARY PRODUCT. mg C/m3/d XXXXX	RELATIVE PHYTOPLANKTON ABUNDANCE				RELATIVE ZOOPLANKTON ABUNDANCE				RELATIVE BENTHOS ABUNDANCE			
DAY XX	MONTH XX	YEAR XXXX			BLUE-GREEN	GREEN	DIATOM	OTHER	ROTIFERA	CLADOCERA	COPEPODA	OTHER	MOLLUSCA	INSECTA	DECAPODA	OTHER
18	9	1984	1	1578												
18	9	1984	2	900												
18	9	1984	3	960												
18	9	1984	4	1350												
18	9	1984	5	1165												
18	9	1984	6	1021												
18	9	1984	7	1890												
18	9	1984	8	480												
18	9	1984	9	1076												
18	9	1984	10	901												
18	9	1984	11	1021												
18	9	1984	12	1170												
15	10	1984	1	1011												
15	10	1984	2	1643												
15	10	1984	3	877												
15	10	1984	4	900												
15	10	1984	5	990												
15	10	1984	6	844												
15	10	1984	7	1193												
15	10	1984	8	787												
15	10	1984	9	923												
15	10	1984	10	406												
15	10	1984	11	923												
15	10	1984	12	967												
15	11	1984	1	1930												
15	11	1984	2	2126												
15	11	1984	3	1930												
15	11	1984	4	1701												
15	11	1984	5	2093												
15	11	1984	6	1864												
15	11	1984	7	1962												
15	11	1984	8	1504												
15	11	1984	9	1341												
15	11	1984	10	1635												
15	11	1984	11	1603												
15	11	1984	12	1177												
13	12	1984	1	2610												
13	12	1984	2	2328												
13	12	1984	3	4090												
13	12	1984	4	2610												
13	12	1984	5	2892												
13	12	1984	6	2751												
13	12	1984	7	2679												
13	12	1984	8	4444												
13	12	1984	9	2116												
13	12	1984	10	2469												
13	12	1984	11	2539												
13	12	1984	12	1975												

TABLE 7.

Water Quality Measurements at Start and End of Each Experiment. Ayutthaya, Thailand, Cycle I, Wet Season

DATE			POND	ALKA. mg/l CaCO3	T.HARD mg/l CaCO3	pH	AMMONIA N mg/l	NO2-N mg/l	NO3-N mg/l	TOTAL NO2&3-N mg/l	TOTAL P mg/l	ORTHO PO4-P mg/l	Cl- mg/l	SALT ppt	SO4 mg/l	B mg/l	Ca mg/l	Cu mg/l	Fe mg/l	Mg mg/l	K mg/l	Na mg/l	Zn mg/l
DAY	MONTH	YEAR																					
XX	XX	XXXX		XXX	XXX	XX.X	X.XX	X.XX	X.XX	X.XX	X.XX	X.XX	XXXXX	XX	XXX.X	X.XXX	XXX.X	X.XXX	X.XXX	XXXX	XXXX	XXXXX	X.XXX
0	8	1984	1	111	450	7.3					none				5.2		4.2	none		4			none
0	8	1984	2	138	520	7.2					none				6.9		5.5	none		5			none
0	8	1984	3	134	580	7.2					none				4.5		4.4	none		5			none
0	8	1984	4	132	482	7.2					none				4.7		4.2	none		5			none
0	8	1984	5	143	524	7.4					none				3.5		3.9	none		3			none
0	8	1984	6	140	590	7.3					none				4.2		3.6	none		3			none
0	8	1984	7	119	520	7.7					none				5.1		4.5	none		4			none
0	8	1984	8	128	544	7.3					none				4.1		3.8	none		4			none
0	8	1984	9	139	582	7.5					none				4.3		4.1	none		3			none
0	8	1984	10	122	550	7.4					none				5.5		4.7	none		5			none
0	8	1984	11	136	652	7.5					none				7.8		5.9	none		6			none
0	8	1984	12	134	594	7.5					none				5.5		4.5	none		5			none
25	12	1984	1	128	707	7.2	0.02			0.00	0.07	0.01	18		10.2		6.7	none	0.080	8	0	21	none
25	12	1984	2	148	708	7.6	0.12			0.00	0.08	0.01	21		11.6		8.2	none	0.070	9	0	23	none
25	12	1984	3	136	752	7.5	0.11			0.00	0.08	0.00	22		8.9		7.5	none	0.070	9	0	23	none
25	12	1984	4	136	664	7.9	0.06			0.00	0.08	0.00	19		6.6		5.85	none	0.060	8	0	21	none
25	12	1984	5	156	720	7.3	0.1			0.00	0.08	0.00	20		8.6		6.7	none	0.090	10	0	22	none
25	12	1984	6	132	780	7.5	0.08			0.00	0.07	0.00	23		9.4		7.35	none	0.060	10	0	23	none
25	12	1984	7	118	764	8.2	0.08			0.00	0.08	0.00	23		9.4		7.6	none	0.090	11	0	24	none
25	12	1984	8	144	844	8.1	0.16			0.00	0.09	0.00	22		10.2		8.45	none	0.080	11	0	23	none
25	12	1984	9	140	692	8.1	0.09			0.00	0.07	0.01	20		8.6		6.35	none	0.070	8	0	20	none
25	12	1984	10	152	612	8.1	0.04			0.00	0.08	0.01	17		6.6		6.25	none	0.070	7	0	19	none
25	12	1984	11	156	712	7.6	0.09			0.00	0.07	0.00	19		7.6		6.95	none	0.060	8	0	20	none
25	12	1984	12	132	668	8.4	0.05			0.00	0.06	0.00	19		7.6		6.95	none	0.060	9	0	22	none

TABLE 8. Pond Soil Measurements. Ayutthaya, Thailand, Cycle I, Wet Season

SAMPLE DATE DAY XX	MONTH XX	YEAR XXXX	POND	CLAY % XX.X	SILT % XX.X	SAND % XX.X	ORG. MAT. % XX.X	pH (WET) XX.X	P ppm XXXXX	Ca meq/ 100g XXX.X	Mg meq/ 100g XXX.X	K ppm XXXXX	Na meq/ 100g XXX.X	TOTAL N % XX.XX	NH4-N ppm XXXXX.X	NO3-N ppm XXXXX.X	C.E.C meq/ 100g XXXX	SOLUBLE SALTS mmhos/cm XX.X	Al ppm XXXXX	Fe ppm XXXXX	Zn ppm XXXXX	Mn ppm XXXXX	Cu ppm XXXXX	SO4-S ppm XXXXX	LIME REQ (SMP) X.X	FREE CaCO3 meq/l XXX.X	EXCH-H meq/ 100g XXX.X	EXCH-NA meq/ 100g XXX.X
13	7	1984	1	67.0	23.0	10.0		7.0	450	18.8	10.3	98							25	20	1	161	2	85				
13	7	1984	2	62.0	24.0	14.0		7.6	420	22.4	9.5	214							36	28	1	54	2	89				
13	7	1984	3	66.0	24.0	10.0		7.5	406	18.5	9.1	98							44	8	1	115	2	77				
13	7	1984	4	68.0	22.0	10.0		7.5	450	22.4	13.6	105							22	20	1	83	3	102				
13	7	1984	5	64.0	23.0	13.0		7.0	450	19.7	10.7	112							96	35	2	125	1	77				
13	7	1984	6	69.0	20.0	11.0		7.5	420	23.4	10.3	126							36	8	1	29	2	92				
13	7	1984	7	66.0	22.0	12.0		7.4	420	25.8	10.3	124							52	35	2	105	2	117				
13	7	1984	8	66.0	24.0	10.0		7.4	420	20.2	9.9	118							48	38	2	100	2	170				
13	7	1984	9	68.0	20.0	12.0		7.4	450	26.3	12.3	108							48	20	1	27	2	113				
13	7	1984	10	69.0	21.0	10.0		7.5	420	21.8	9.5	98							30	20	2	21	2	117				
13	7	1984	11	70.0	21.0	9.0		7.6	390	18.5	11.3	87							22	16	1	63	2	82				
13	7	1984	12	63.0	23.0	14.0		7.3	460	20.3	9.1	112							28	20	2	135	1	104				

Pond Soil Measurements. Ayutthaya, Thailand, Cycle I, Dry Season

SAMPLE DATE DAY XX	MONTH XX	YEAR XXXX	POND	CLAY % XX.X	SILT % XX.X	SAND % XX.X	ORG. MAT. % XX.X	pH (WET) XX.X	P ppm XXXXX	Ca meq/ 100g XXX.X	Mg meq/ 100g XXX.X	K ppm XXXXX	Na meq/ 100g XXX.X	TOTAL N % XX.XX	NH4-N ppm XXXXX.X	NO3-N ppm XXXXX.X	C.E.C meq/ 100g XXXX	SOLUBLE SALTS mmhos/cm XX.X	Al ppm XXXXX	Fe ppm XXXXX	Zn ppm XXXXX	Mn ppm XXXXX	Cu ppm XXXXX	SO4-S ppm XXXXX	LIME REQ (SMP) X.X	FREE CaCO3 meq/l XXX.X	EXCH-H meq/ 100g XXX.X	EXCH-NA meq/ 100g XXX.X
1	9	1983	1	70	18	12	1.85	4.4	3			157					20.8		1160	127.2				133.3				
1	9	1983	2	66	24	10	1.51	4.3	3			142					21.1		680	115.2				110				
1	9	1983	3	66	24	10	1.61	4	3			142					19.9		840	165.6				133.3				
1	9	1983	4	66	24	10	1.38	4.3	2			127					20		2560	106.4				133.3				
1	9	1983	5	65	23	12	1.24	4.2	2			131					20.3		140	95.2				303.3				
1	9	1983	6	66	26	8	1.48	4	3			137					19.8		180	127.2				210				
1	9	1983	7	66	24	10	1.28	3.9	2			127					20.1		1150	142.4				190				
1	9	1983	8	66	24	10	1.28	4	3			132					16.6		960	137.6				140				
1	9	1983	9	64	24	12	1.31	4.1	2			155					19.6		620	131.2				160				
1	9	1983	10	67	25	8	1.38	4.1	2			146					17.6		2000	131.2				133.3				
1	9	1983	11	68	23	9	1.34	4.1	2			146					20.1		1280	104.8				190				
1	9	1983	12	69	24	7	1.28	4.1	2			142					20.4		2000	154.8				190				