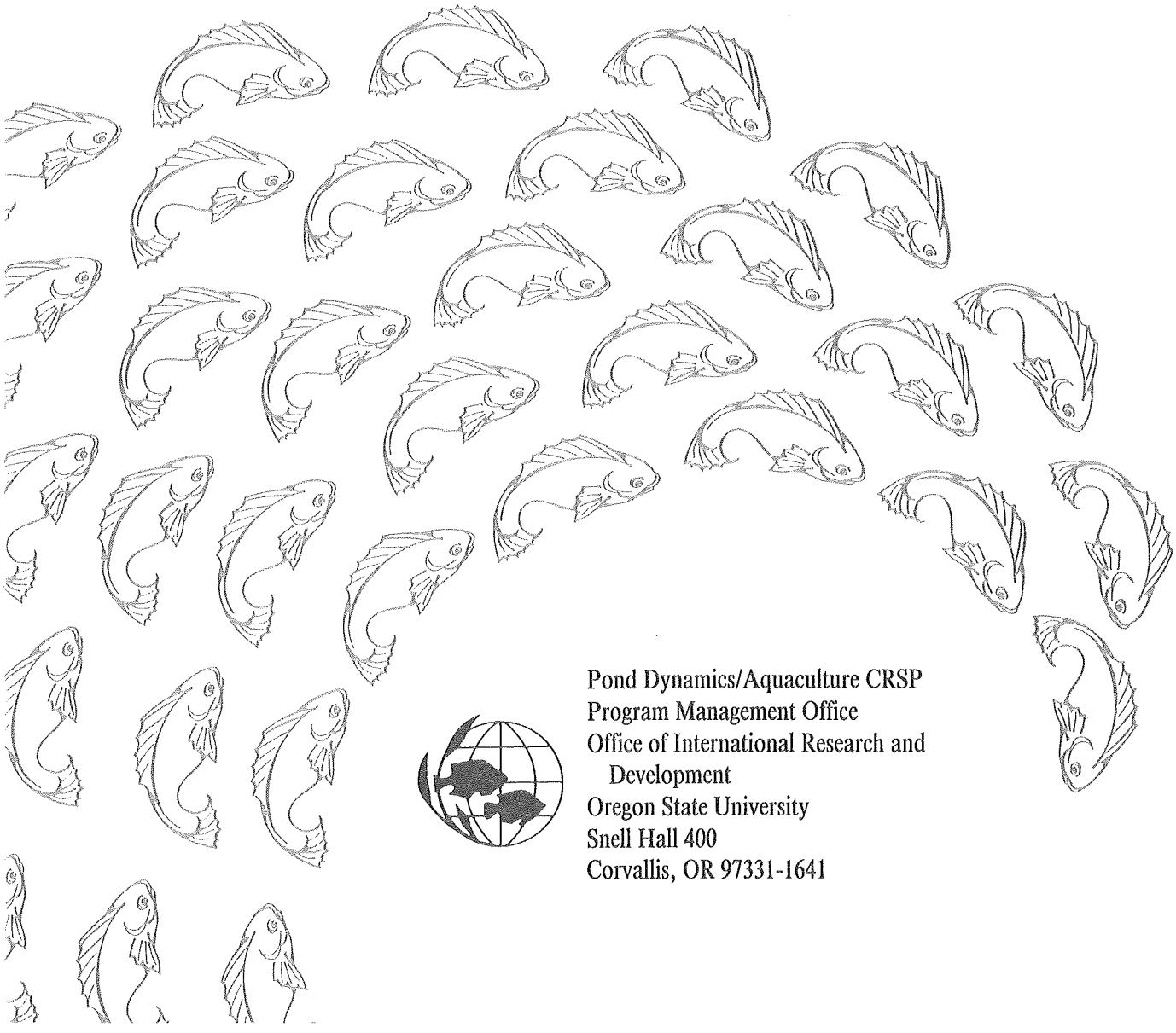
Pond Dynamics/Aquaculture Collaborative Research Data Reports

Volume Two, Number Two
Thailand Project

Cycle II of the CRSP Global Experiment



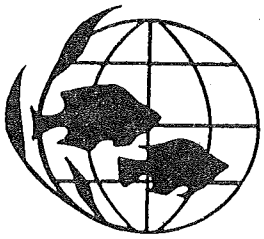
Pond Dynamics/Aquaculture CRSP
Program Management Office
Office of International Research and Development
Oregon State University
Snell Hall 400
Corvallis, OR 97331-1641

POND DYNAMICS/AQUACULTURE COLLABORATIVE RESEARCH DATA REPORTS

Volume Two, Number Two.
Thailand: Cycle II of The Global Experiment

December 20, 1990

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



Edited by Hillary S. Egna
Jim Bowman
Marion McNamara

Pond Dynamics/Aquaculture
Collaborative Research Support Program
Office of International Research and Development
Snell Hall 400
Oregon State University
Corvallis, Oregon 97331-1641

In collaboration with The University of Michigan and the
Royal Thai Department of Fisheries, Bangkok, Thailand

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 an 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.

ACKNOWLEDGEMENT

Primary funding for the activities of the Pond Dynamics/Aquaculture Collaborative Research Support Program has been provided by the United States Agency for International Development under grant numbers DAN-4023-G-SS-2074-00, DAN-4023-G-SS-7066-00, and DAN-4023-G-00-0031-00.

TABLE OF CONTENTS

	page
FOREWORD	iii
INTRODUCTION	1
MATERIALS AND METHODS	1
RESULTS	3
DISCUSSION	4
LITERATURE CITED	6
TABLES	9
FIGURES	11
APPENDIX Complete set of data from Cycle II of the Pond Dynamics/Aquaculture CRSP in Thailand	

LIST OF TABLES AND FIGURES

page

Table 1. Summary stocking and harvest data for *Oreochromis niloticus* in the four experimental treatments. Mean (SD). 9

Table 2. Significant simple linear regression statistics for primary production, monthly net adult fish yield, or chlorophyll *a* as dependent variables and other physical, chemical, and biological data as independent variables. 10

Figure 1. Total monthly rainfall at the experimental ponds for 1985. 11

Figure 2. Diel changes in the mean of monthly surface and bottom water temperatures for the experimental ponds. 12

Figure 3. Trends in mean total inorganic nitrogen in the experimental ponds. .. 13

Figure 4. Mean total phosphorus trends in the experimental ponds. 14

Figure 5. Diel changes in the mean of monthly surface and bottom dissolved oxygen levels for experimental ponds enriched with inorganic fertilizers. 15

Figure 6. Diel changes in mean oxygen differentials (top vs. bottom) for organically and inorganically fertilized ponds averaged over months and ponds for a treatment. 16

Figure 7. Mean Secchi disk depth trends in the experimental ponds. 17

Figure 8. Mean chlorophyll *a* concentrations in the experimental ponds. 18

Figure 9. Mean primary productivity values for the experimental ponds. 19

Figure 10. Trends in mean fish biomass in the experimental ponds. 20

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 Central 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 Central 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, to predict the performance of existing and proposed pond systems subject to specific inputs and constraints, and to 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 CRSP Central Data Base and to present interpretations of site-specific results. The Pond Dynamics/Aquaculture 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 CRSP site. It presents the physical characteristics of each site, including a geographical sketch, climatology, and water and soil analyses. Experimental cycles are described in CRSP Work Plans One throughThree, 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 Data Report will include one cycle (wet and dry seasons) of the Pond Dynamics/Aquaculture CRSP Global Experiment. Therefore, with few exceptions, each project site will have three Data Reports devoted to it, representing the results of the three cycles of the Global Experiment. Cycle II of the Global Experiment in Ayutthaya, Thailand is presented in this volume.

INTRODUCTION

Nile tilapia (*Oreochromis niloticus*) are commonly grown in ponds fertilized to increase primary and secondary production. The fertilization of fishponds has been widely studied, often with conflicting results. Temperate ponds, with low stocking densities, seem to require only phosphorus additions (Yamada 1986). In contrast, subtropical or tropical ponds with higher stocking densities achieve higher yields with nitrogen and phosphorus additions (Boyd 1976). Phytoplankton have an N:P weight ratio approaching 10:1 (Goldman 1980). The nitrogen requirement for ponds is also dependent on the amount of nitrogen fixed by aquatic communities (Colman and Edwards 1987; Lin et al. 1988). Fertilizer composition requirements may thus vary widely, depending on local conditions.

A similar controversy exists between the use of organic and inorganic fertilizers. Inorganic fertilizer has been promoted as more desirable due to its lower loading rates (due to higher nutrient contents) and lower oxygen demand (Yamada 1986, Colman and Edwards 1987). However, manure has often been demonstrated to increase fish yield beyond that expected from the addition of inorganic forms of N and P alone (Schroeder 1978, Noriega-Curtis 1979). Organic fertilizers are believed to increase yields by three different processes: (1) direct consumption by fish, (2) utilization by other heterotrophic organisms, and (3) increased N and P available to phytoplankton (Tang 1970). Only the third process occurs in inorganically fertilized ponds. In addition, phosphates from inorganic fertilizers often accumulate in pond sediments and are not available to phytoplankton (Hickling 1962).

The purpose of this study was to examine the relationships between physical, chemical, and biological processes in ponds and fish yields under different fertilization regimes and climatic seasons. The fertilization regimes compared included applications of organic and inorganic fertilizers at equivalent high levels.

MATERIALS AND METHODS

Data for this study were collected at the Ayutthaya Freshwater Fisheries Station located at Bang Sai (14° 45' N, 100° 32' E), approximately 60 km northwest of Bangkok, Thailand. Pond soil was slightly basic (pH 7.4) and impermeable. Ponds used in the experiments were 220 m^3 in volume (surface area = 250 m^2) when filled to the normal water depth of 0.9 m; water was pumped into individual ponds as necessary to maintain this depth. A narrow walkway was constructed extending from the bank to the center of each pond, so that samples and measurements could be made at a consistent location.

Oreochromis niloticus were spawned in brood ponds, raised on site to about 25-35 g, then manually sorted to select males for stocking at 1 fish/m^3, or 220 fish/pond. Each experiment lasted five months and corresponded with either the annual dry or wet season.

The experiments were run during the dry (February through June) and wet (August through December) seasons of 1985. In each season, four ponds received organic fertilizer inputs in the form of locally available, layer chicken manure (assayed at 2.8, 4.5, and 3.1% (N-P-K), by weight) at a rate of 71.4 kg/ha/day (500 kg/ha/week). The other four ponds were treated with inorganic fertilizers: urea (47-0-0) was applied at 4.3 kg/ha/day and triple superphosphate (TSP, 0-46-0) was added at a rate of 14.3 kg phosphorus/ha/day. Fertilizer was applied biweekly by suspending measured amounts of TSP in a porous bag in the upper 25 cm of the water column. Nitrogen and phosphorus loading rates were identical between the two sets of ponds at 2 kg nitrogen/ha/day and 3.2 kg phosphorus/ha/day.

Weather data (solar radiation, rainfall, and wind speed) were recorded daily. Solar radiation was measured in Einsteins/m^2/d by a LI-COR Solar Monitor and a LI-COR Quantum Sensor installed at the study site. Rainfall was determined using three rain gauges mounted at the pond sites. A Windscope Wind Speed and Direction Indicator provided daily wind speed readings.

Diel fluctuations in dissolved oxygen (D.O.) and temperature were measured monthly at 4-h intervals, using a Yellow Springs Instrument (YSI) D.O. Meter with a Temperature Indicator. The D.O. meter was calibrated daily, using air calibration, and its values were compared once per month with values determined by the Winkler method (APHA et al. 1980). D.O. and temperature were measured at three levels in the water column: 25 cm below the surface (top), midwater (middle), and 25 cm above the pond bottom (bottom). Oxygen and temperature differentials for each 4-h sampling time were defined as the difference between top and bottom values for each variable.

Secchi disk depth and chlorophyll *a* concentrations were recorded weekly during the dry season and twice-weekly during the wet season. Visibility was calculated as the average of the depths at which the Secchi disk disappeared when lowered and reappeared when raised (Lind 1979). Chlorophyll *a* was measured according to methods detailed by Wetzel and Likens (1979), using one water sample per pond pooled from three 90-cm column samples taken at 1000 h.

Concentrations of ammonia, nitrate, nitrite, and total phosphorus in the water were measured weekly during both experiments, using procedures detailed in *Standard Methods* (APHA et al. 1980). Water samples, taken with a PVC tube column sampler at three locations in each pond at 1000 h, were pooled and passed through a 25 µm filter. Total ammonia was analyzed by the phenate procedure, nitrate by the phenoldisulfonic procedure, and nitrate was reduced to nitrite by cadmium column. Total inorganic nitrogen was calculated as the sum of the three inorganic nitrogen values. Unfiltered water samples were analyzed for total phosphorus using the persulfate digestion procedure (APHA et al. 1980).

Primary production was determined monthly during the dry season experiment and weekly during the wet season. In each pond two light bottles and one dark bottle were filled with mixed-column water and incubated horizontally 25 cm below the water surface for three hours (0800-1100 h). The value obtained (mg C/m^3) during the incubation period was used to extrapolate the total productivity over the photoperiod of the day. The conversion factor was based on the solar radiation (Einsteins/ m^2/h) integrated over the incubation period and the corresponding daily photoperiod. Thus, this measure equates to gross primary productivity (McConnell et al. 1977). This method suffers from its inability to estimate total water column production unless a volumetric approach is used (Noriega-Curtis 1979). However, these values probably can be used in a comparative fashion among ponds treated similarly.

Fish stocked initially in each pond were sexed, counted, and weighed in groups. Average weight of fish in each pond was estimated monthly by weighing fish samples representing about 10% of the initial number stocked. At termination of the experiments, all ponds were drained and fish were removed, weighed, and counted. The numbers of fish present each month were estimated by linear interpolation from the initial and final fish numbers. Total monthly biomass of adult (stocked) tilapia was calculated from mean individual weight multiplied by monthly number of fish. Offspring produced in the ponds were removed by seine, weighed, and discarded on a monthly basis. The monthly net yield of adults was calculated by subtracting the biomass at month m-1 from the biomass at month m. Total net yield was the sum of net adult yield and total yield of offspring produced each month.

To standardize the data set for statistical analysis, measurements made at daily, weekly, and biweekly intervals were averaged to obtain one value per calendar month. Analysis of variance (ANOVA) was used to determine differences between treatments (organic or inorganic fertilizer) or seasons (wet or dry), using an alpha level of 0.05. Between-pond differences (within-treatment) were tested by comparing the monthly values of each parameter for each pond by ANOVA. Temperature and oxygen differentials (as dependent variables) were compared to physical and chemical variables by step-wise regression to determine factors influencing stratification. Predictive relationships between adult fish yield or primary production as dependent variables and other physical, chemical, or biological variables were evaluated by regression analysis. The significance level for all tests was set at 0.05, and the statistical program used was MIDAS (Fox and Guire 1976).

RESULTS

Climate

Central Thailand has a monsoonal climate with wet and dry seasons (Figure 1). The total wet season rainfall during 1985 was 569.7 cm, while total rainfall during the dry season of 1985 was 32.7 cm.

The 1985 dry season was exceptionally warm; the average maximum air temperature was 36.9°C and the average minimum air temperature was 26.3°C. Winds were generally calm (average 2.9 km/h). The average daily solar radiation was 38.9 Einsteins/m^2/d. Air temperatures during the 1985 wet season were cooler, with an average maximum of 32.6°C and an average minimum of 25.9°C. Solar radiation (30.3 Einsteins/m^2/d) and wind speed values (1.3 km/h) were also lower than dry season values.

Physical and Chemical Parameters

Bottom water temperature varied little between ponds for a sample date, but differed significantly between months. The average maximum monthly bottom water temperature was 29.5°C in September, and the average minimum monthly bottom water temperature was 24.6°C in December. Peak temperature stratification was observed regularly around 1400 h, with relatively small differentials (average 1.8°C), and was not significantly different between treatments (ANOVA, $p < 0.05$; Figure 2). The average weekly maximum water temperature was 32.4°C in the dry season and 31.3°C in the wet season. However, diel data for the two seasons showed no significant difference in water temperatures, which was probably a coincidence related to the five days of each season that were chosen for diel analyses.

There were no significant differences in total inorganic nitrogen concentrations between ponds within a treatment (defined as a unique fertilizer type and season), but there were differences among treatments (ANOVA, $p < 0.05$; Figure 3). The organic treatment had a significantly lower nitrogen level than the inorganic treatment (0.13 vs. 0.20 mg/L, ANOVA, $p < 0.05$). There was also a seasonal effect, as average nitrogen levels were higher in both fertilizer treatments during the wet season. This difference was magnified with organic fertilization (dry season = 0.06 mg/L, wet season = 0.19 mg/L). Nitrate-nitrite was the predominant form of nitrogen present in organically fertilized ponds, whereas ammonia predominated in inorganic treatments.

Total phosphorus concentrations in the ponds were also dependent on treatment. There were no significant differences between ponds within each treatment. However, mean phosphorus levels were 0.13 mg P/L in ponds receiving organic inputs and 0.84 mg P/L in ponds receiving inorganic inputs (Figure 4). There were significant temporal effects in both treatments, although trends were not consistent. From a comparison of the nitrogen and phosphorus levels in our samples it appears that nitrogen may have been a factor limiting algal production, due to its lower concentration in the water and its higher requirement in algal cells.

Maximum oxygen concentrations were observed in mid-afternoon, whereas minimum concentrations were observed in the early morning (0530 h). Average oxygen concentrations at dawn were about 5 mg/L and were similar for all treatments in both seasons, and peak oxygen stratification occurred at 1400 h (Figure 5). The average vertical oxygen differential (oxygen at top minus oxygen at bottom of water column) was significantly greater in inorganically fertilized ponds (7.6 mg/L) than in organically fertilized ones (3.0 mg/L, ANOVA, $p < 0.01$) (Figure 6).

Biological Parameters

There were no significant differences in Secchi disk depths between ponds within a treatment. Average Secchi disk values in organically and inorganically fertilized ponds were 30.0 and 19.9 cm, respectively (Figure 7). Although Secchi disk depths differed significantly from month to month, this did not reflect a consistent increase or decrease over time.

Chlorophyll *a* levels were not significantly different between ponds within a treatment. There were no significant differences in average chlorophyll *a* concentrations between organically (96 mg/m^3) and inorganically (125 mg/m^3) fertilized ponds at high nutrient levels, due to high variability in observations. There were significant time trends in chlorophyll *a* concentrations for each fertilization treatment, but these trends were inconsistent (Figure 8).

Primary productivity showed trends similar to chlorophyll *a*, with no significant differences between ponds within treatments, no significant difference between organically (11.5 g C/m^3/d) and inorganically (13.0 g C/m^3/d) fertilized ponds, and significant monthly differences with no consistent time trends (Figure 9).

Net monthly adult fish yield did not differ significantly between ponds of a treatment. There was a significant difference in net adult yield and biomass between organically (11.2 kg/ha/d) and inorganically (9.0 kg/ha/d) fertilized ponds (Figure 10). There were also significant monthly differences in fish yield for all treatments, but these trends were inconsistent over time.

Regression Analyses

Multiple regression analysis between the temperature differential at 1400 h as the dependent variable and air temperature, solar radiation, wind speed, rainfall, primary production, chlorophyll *a*, Secchi disk depth, and adult fish biomass as independent variables included only air temperature and solar radiation as significant predictors in the relationship ($R^2 = 0.60$). However, this relationship varied seasonally. During the wet season of 1985, a significant relationship was found ($p<0.05$) which included air temperature, wind velocity, and rainfall ($R^2=0.99$). During the 1985 dry season, solar radiation, air temperature, and rainfall accounted for nearly 100% of the variation in temperature differentials at 1400 h.

Multiple regression analysis between the oxygen differential at 1400 h as the dependent variable and the temperature differential, air temperature, wind velocity, solar radiation, daily rainfall, chlorophyll *a* concentration, adult fish biomass, and Secchi disk depth as independent variables indicated that primary production alone accounted for 52% of the variance in oxygen differentials at 1400 h. When analyzed by season, results were inconclusive.

Simple linear regression analysis indicated that primary production was significantly dependent on rainfall, windspeed, chlorophyll *a* content, total phosphorus, and Secchi disk depth (Table 2). Temperature and most other variables were not significantly correlated to primary production. Rainfall and windspeed had the highest coefficients of determination ($r^2 = 0.29$ and 0.23, respectively), and none had an $r^2 > 0.50$.

Monthly net adult fish yield was significantly correlated to chlorophyll *a* content and rainfall (Table 2), and weakly correlated to dissolved oxygen. Total net yield showed similar but weaker correlations in most cases. It was significantly correlated to dissolved oxygen, and also weakly to ammonia and chlorophyll *a* content. Temperature and many other physical or chemical variables had no apparent effect on adult fish yield.

Chlorophyll *a* content was significantly correlated to Secchi disk depth, but the correlation was not very strong.

DISCUSSION

Mean primary productivity (measured as gross productivity) was similar to maxima of 10 g C/m^3/d for Israeli fish ponds reported by Hepher (1962). Hepher's (1962) data indicated that most primary productivity occurred in the top 30 cm of a pond. Thus, the presently measured primary productivity values are probably maximum values rather than whole water column values. Regressions between primary production and other measured variables indicated that differences in rainfall

($r^2 = 0.29$), windspeed ($r^2 = 0.23$), and chlorophyll *a* concentration ($r^2 = 0.20$) accounted for most of the variance in primary production. Possibly the rapid use of available phosphorus and nitrogen by phytoplankton caused those nutrients to be held at low concentrations, thus obscuring any relationship with primary production. Although inorganically fertilized ponds often lose phosphorus to sediments (Hickling 1962), the inorganically treated ponds in this study had higher phosphorus concentrations in the water than the organically fertilized ponds (Figure 4). Correlations between chlorophyll *a* and primary production were relatively low in this study as compared to previous work (Almazan and Boyd 1978, Liang et al. 1981).

Regression analysis indicated positive linear relationships between primary production and rainfall and between net adult yield and rainfall. Rainfall caused greater mixing and may have resulted in nutrient resuspension, as temperature stratification was negatively correlated with rainfall. Little runoff occurred, as the only watershed for each pond was the dyke itself. Thus, enrichment from runoff was unlikely. Rainfall is generally low in nutrients, and the level of nitrogen or phosphorus addition for a 1-cm rainfall (Likens and Bormann 1974) would be less than 0.001% of the fertilizer application of these nutrients in high-input experiments.

Net yield was higher in organically fertilized ponds than in inorganically fertilized ponds, even though primary production and chlorophyll *a* concentrations were similar. This may indicate heterotrophic feeding by the fish, as manure adds detrital material and contributes directly to bacterial and zooplankton production (Tang 1970), and microphagous tilapias are known to feed extensively on detritus (Bowen 1979, 1982). An alternative explanation for the lower yield of the inorganically fertilized ponds could be that deleterious pH levels were caused by the addition of inorganic fertilizer (Boyd 1979). While the average pH was significantly different between organic and inorganic fertilized ponds (8.1 and 8.4, respectively, ANOVA, $p < 0.001$), the range of pH values was similar in both cases (7.0 - 9.1 in organic ponds, 7.4 - 9.5 in inorganic ponds) and never reached levels that were critically high or low according to Balarin and Hatton (1979).

Secchi disk depth was only marginally useful as a predictor of chlorophyll *a* levels ($r^2 = 0.34$; log-log plot), in contrast to work in catfish ponds in the U.S.A., where the correlation was much higher ($r^2 = 0.67$) (Boyd 1979). One factor that influenced our measurements and correlations was the effect of fertilizer type on Secchi disk depth, as manure treatments had higher water clarity than inorganic treatments. Organic material is commonly used to remove clay turbidity from water (Swingle and Smith 1947; Irwin and Stevenson 1951). While algal-clay flocculation has also been demonstrated to reduce turbidity (Avnimelech et al. 1982), this mechanism probably did not influence the differences for Secchi disk depth found in the high-input experiments of this study, because chlorophyll *a* (an indicator of algal biomass) levels were not significantly different between the two fertilizer types.

Pond stratification occurred regularly, particularly for dissolved oxygen. Temperature stratification was correlated to wind velocity and pond heating rate, yet these variables were only moderately correlated with temperature differentials (multiple $R^2 = 0.60$). However, multiple regressions on seasonal data were very predictive, and also included rainfall. These highly predictive regressions for each season indicate that climatological factors, like wind and solar radiation, differ from wet to dry season. It was more difficult to account for oxygen stratification, which one would expect to be related to oxygen production and consumption, as well as to weather. In these analyses, primary production was the only independent variable included in this regression, and it accounted for only 52% of the variance in oxygen differentials. Oxygen stratification was higher in inorganically fertilized ponds than in organically fertilized ponds. This response may have been mainly due to increased water clarity in the organically fertilized ponds, which allowed photosynthesis throughout the water column rather than only in surface waters as may have occurred in inorganically fertilized ponds.

Monthly net adult fish yield was strongly correlated to rainfall and primary production. Similar correlations occurred between total net yield and primary production. The correlations to primary production were low compared to those reported in studies done on other water bodies (McConnell et al. 1977, Oglesby 1977, Liang et al. 1981). This may be partly due to our biased primary production analyses, as noted above. However, the positive correlation suggests that fish growth was at least partly related to the ingestion of autochthonous material rather than to predominantly heterotrophic food

sources. The superior growth noted in organically fertilized ponds may also indicate heterotrophy, as was shown by Schroeder (1978) in manured ponds.

A factor that may have affected these analyses was the timing of sampling, as time lags were ignored. For example, primary production for a given time period was considered dependent on nutrient levels at the time of sampling. Data were combined into monthly means per pond, because the sampling frequency differed among the parameters. This may have obscured time lags and other transient relationships between factors. Fish yield analyses were further obscured by other problems. Monthly mortality was estimated from known numbers of fish only at the beginning and termination of each experiment. Mortality rate was assumed constant over time, but losses may have occurred mainly over some small time interval. Mortality was generally small (< 10%), so errors from this assumption should have been minor. Monthly growth estimates were based on netted subsamples, whereas final fish size was determined from all fish in the pond. Thus, the observed variation in tilapia production during the last month of each experiment was more likely due to biased estimates from previous months than to a different growth rate. Spawning in most ponds was limited by stocking manually sorted males, but errors in sorting did lead to significant recruitment in some ponds. The biomass of young produced was occasionally large, but in general, it was less than 30% of the total yield (Table 1). Thus, reproduction probably resulted in increased variability within a treatment. However, correlations of all factors tested in this study to total net yield were no better than correlations of these factors to adult yield.

Nitrogen appeared to be the limiting nutrient in these experiments. The chicken manure used had N and P percentages of 2.8 and 4.5, respectively, by weight. Chicken manure varies tremendously in composition, with ratios of N:P reported to be 1.1:2.1 (in Indonesia—Batterson et al. 1989), 2.2:1.6 (in Honduras—Green et al. 1989), and 1.2:0.5 (in the United States—Boyd 1979). Obviously, limiting nutrients will vary depending on manure composition, which varies locally. Similarly, the main form of nitrogen varied among treatments in this experiment, with NH_3 predominating in inorganically fertilized ponds and NO_3 in organically fertilized ponds. Because urea ($CO(NH_2)_2$) was the form of inorganic nitrogen used, the importance of ammonia in inorganic treatments was mainly due to source. Uric acid, which is the main chicken excretory product, may be oxidized in manure by exposure to air, or nitrified in water, allowing nitrate to be the major nitrogen form in manured ponds.

These analyses indicate that, at least for the current data set, regression models using chemical, physical, and biological data only moderately predicted monthly primary production or net adult yield. This is unfortunate because better correlations would allow comparisons between sites and predictions of yield based on practices to increase primary production or nutrient availability. Currently, yield models of fish culture are restricted to intensive systems (with feeding) (Diana et al. 1988; Ross et al. 1988). These models focus on bioenergetic parameters. Whether similar models can be used for managing fertilized aquaculture systems is uncertain.

LITERATURE CITED

APHA (American Public Health Association), American Water Works Association, and Water Pollution Control Federation. 1980. Standard methods for the examination of water and wastewater. 15th edition. APHA, Washington, D.C.

Almazan, G., and C.E. Boyd. 1978. Plankton production and tilapia yield in ponds. Aquaculture 15:75-77.

Avnimelech, Y., B.W. Troeger, and L.W. Reed. 1982. Mutual flocculation of algae and clay: evidence and implications. Science 216:63-65.

Balarin, J.D., and J.P. Hatton. 1979. Tilapia, a guide to their biology and culture in Africa. Institute of Aquaculture, University of Stirling, Stirling, Scotland.

Batterson, T.R., C.D. McNabb, C.F. Knud-Hansen, H.M. Eidman, and K. Sumatadinata. 1989. Pond Dynamics/Aquaculture Collaborative Research Data Reports. Vol. 3 No. 3. Indonesia project: cycle III of the CRSP global experiment. Pond Dynamics/Aquaculture Collaborative Research Support Program, Office of International Research and Development, Oregon State University, Corvallis, Oregon, USA.

Bowen, S.H. 1979. A nutritional constraint in detritivory by fishes: the stunted population of *Sarotherodon mossambicus* in Lake Sibaya, South Africa. Ecological Monographs 49:17-31.

Bowen, S.H. 1982. Feeding, digestion, and growth—qualitative considerations. Pages 141-156 *in* R.S.V. Pullin and R.H. Lowe-McConnell, editors. The biology and culture of Tilapias. International Center for Living Aquatic Resources Management, Manila, Philippines.

Boyd, C.E. 1976. Nitrogen fertilizer effects on production of tilapia in ponds fertilized with phosphorus and potassium. Aquaculture 7:385-390.

Boyd, C.E. 1979. Water quality in warmwater fish ponds. Auburn University Agricultural Experiment Station, Auburn, Alabama, USA.

Colman, J.A., and P. Edwards. 1987. Feeding pathways and environmental constraints in waste-fed aquaculture: balance and optimization. Pages 240-281 *in* P.J.W. Moriarity and R.S.V. Pullin, editors. Detritus and microbial ecology in aquaculture. International Center for Living Aquatic Resources Management, Manila, Philippines.

Diana, J.S., S.L. Kohler, and D.R. Ottey. 1988. A yield model for walking catfish production in aquaculture systems. Aquaculture 71:23-35.

Fox, D.J., and K.E. Guire. 1976. Documentation for MIDAS. Statistical Research Laboratory, The University of Michigan, Ann Arbor, Michigan, USA.

Goldman, J.C. 1980. Physiological processes, nutrient availability, and the concept of relative growth rate in marine phytoplankton ecology. Pages 179-194 *in* P.G. Falkowski, editor. Primary productivity in the sea. Plenum Press, New York.

Green, B.W., H.R. Alvarenga, R.P Phelps, and J. Espinoza. 1989. Pond Dynamics/Aquaculture Collaborative Research Data Reports. Vol. 6 No. 3. Honduras project: cycle III of the CRSP global experiment. Pond Dynamics/Aquaculture Collaborative Research Support Program, Office of International Research and Development, Oregon State University, Corvallis, Oregon, USA.

Hepher, B. 1962. Primary production in fishponds and its application to fertilization experiments. Limnology and Oceanography 7:131-135.

Hickling, C.F. 1962. The farming of fish. Pergamon Press, London.

Irwin, W.H., and J.H. Stevenson. 1951. Physicochemical nature of clay turbidity with special reference to clarification and productivity of impounded waters. Oklahoma Agricultural and Mechanical College Bulletin 48:1-54.

Liang, Y., J.M. Melack, and J. Wang. 1981. Primary production and fish yields in Chinese ponds and lakes. Transactions of the American Fisheries Society 110:346-350.

Likens, G.E., and F.H. Bormann. 1974. Acid rain: a serious regional environmental problem. Science 184:1176-1179.

Lin, C.K., C. Apinhapath, and V. Tansakul. 1988. Biological nitrogen fixation as a source of nitrogen input in fishponds. Pages 53-58 *in* R.S.V. Pullin, T. Bhukaswan, K. Tonguthai and J.L. Maclean, editors. The Second International Symposium on Tilapia in Aquaculture. ICLARM Conference Proceedings 15. International Center for Living Aquatic Resources Management, Manila, Philippines.

Lind, O.T. 1979. Handbook of common methods in limnology. 2nd edition. C.V. Mosby Company, St. Louis, Missouri, USA.

McConnell, W., S. Lewis, and J.E. Olson. 1977. Gross photosynthesis as an estimator of potential fish production. Transactions of the American Fisheries Society 106:417-423.

Noriega-Curtis, P. 1979. Primary productivity and related fish yield in intensely manured fishponds. Aquaculture 17:335-344.

Oglesby, R.T. 1977. Relationships of fish yield to lake phytoplankton standing crop, production, and morphoedaphic factors. Journal of the Fisheries Research Board of Canada 34:2271-2279.

Ross, L.G., R.W. McKinney, and B. Ross. 1988. Energy budgets for cultured tilapias. Pages 83-89 *in* R.S.V. Pullin, T. Bhukaswan, K. Tonguthai and J.L. Maclean, editors. The Second International Symposium on Tilapia in Aquaculture. ICLARM Conference Proceedings 15. International Center for Living Aquatic Resources Management, Manila, Philippines.

Schroeder, G.L. 1978. Autotrophic and heterotrophic production of micro-organisms in intensely-manured fish ponds, and related fish yields. Aquaculture 14:303-325.

Swingle, H.S., and E.V. Smith. 1947. Management of farm fish ponds. Alabama Polytechnic Institute Agricultural Experiment Station Bulletin 254, Auburn, Alabama, USA.

Tang, Y.A. 1970. Evaluation of balance between fishes and available fish foods in multispecies fish culture ponds in Taiwan. Transactions of the American Fisheries Society 99:708-718.

Wetzel, R.G., and G.E. Likens. 1979. Limnological analyses. W.B. Saunders Co., Philadelphia, Pennsylvania, USA.

Yamada, R. 1986. Pond production systems: fertilization practices in warmwater fish ponds. Pages 97-110 *in* J.E. Lannan, R.O. Smitherman, and G. Tchobanoglous, editors. Principles and practices of pond aquaculture. Oregon State University Press, Corvallis, Oregon, USA.

Table 1. Summary stocking and harvest data for *Oreochromis niloticus* in the four experimental treatments. Mean (SD).

Treatment	Stocking (N/ha)	Stocking (kg/ha)	Number of Days	Harvest (N/ha)	Harvest (kg/ha)	Survival (%)	Offspring Production (kg/ha)	Total Net Yield (kg/ha/d)	Adult Net Yield (kg/ha/d)
Wet season									
Organic	8800	248 (4)	148	8040 (204)	2002 (244)	91.4 (2)	1412 (266)	21.4 (2.4)	11.9 (1.9)
Inorganic	8800	258 (4)	148	7740 (508)	1311 (64)	88.0 (6)	1644 (217)	18.2 (1.7)	8.8 (0.4)
Dry season									
Organic	8800	225 (11)	150	7880 (516)	1793 (184)	93.8 (6)	876 (559)	16.3 (3.2)	10.5 (1.1)
Inorganic	8800	220 (27)	150	7750 (653)	1601 (413)	92.3 (8)	2300 (438)	24.6 (4.6)	9.2 (2.5)

Table 2. Significant simple linear regression statistics for primary production, monthly net adult fish yield, or chlorophyll *a* as dependent variables and other physical, chemical, and biological data as independent variables.

Independent Variable	Slope	Intercept	r^2	N	Significance
		Primary Production			
Rainfall	752.240	9318.5	0.29	64	0.0001
Windspeed	-5393.400	21700.0	0.23	64	0.0001
Chlorophyll *a*	62.817	5298.8	0.20	64	0.0002
Total Phosphorus	6353.000	9179.0	0.09	64	0.0001
Secchi Disk	-369.950	21545.0	0.07	64	0.0320
		Monthly Net Adult Yield			
Chlorophyll *a*	0.7628	27.807	0.238	64	0.0001
Rainfall	-0.7121	39.048	0.211	64	0.0001
D.O.	3.4196	52.606	0.140	64	0.0023
		Monthly Total Net Yield			
D.O.	-2.671	27.792	0.114	64	0.0064
Ammonia	24.708	12.047	0.072	64	0.0324
Chlorophyll *a*	0.036	11.023	0.071	64	0.0300
		Chlorophyll *a*			
Secchi Disk Depth (log-log)	-1.330	3.811	0.340	64	0.0001

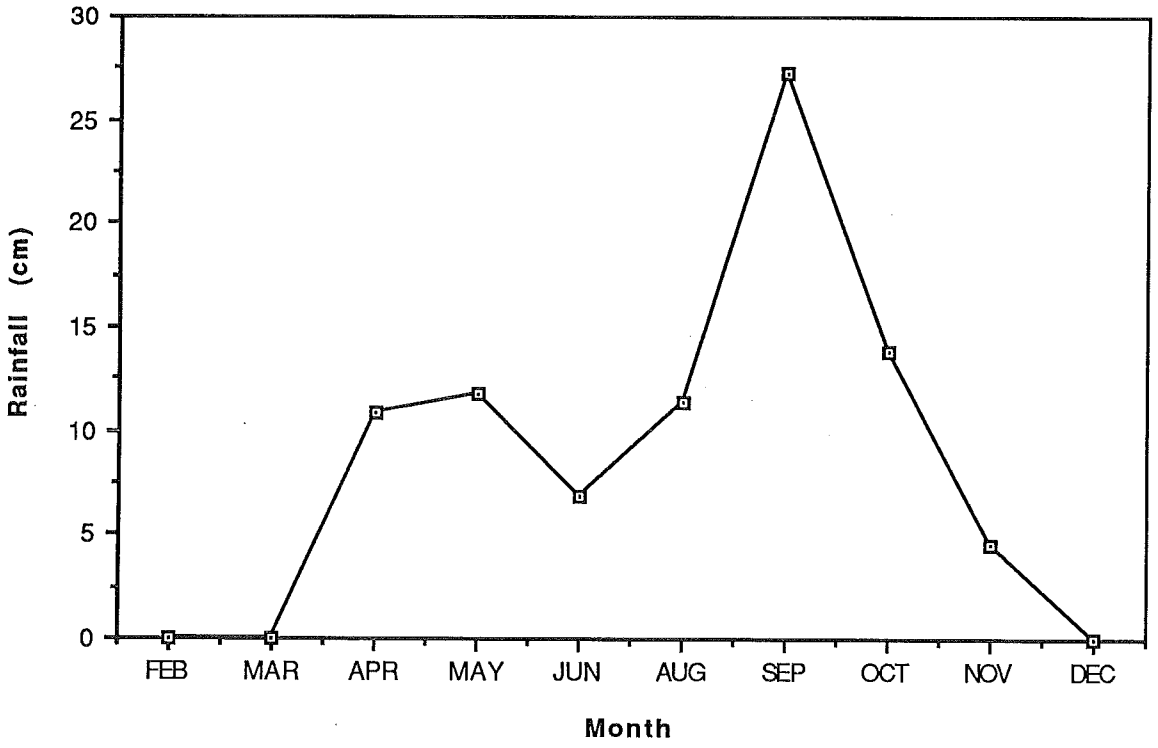
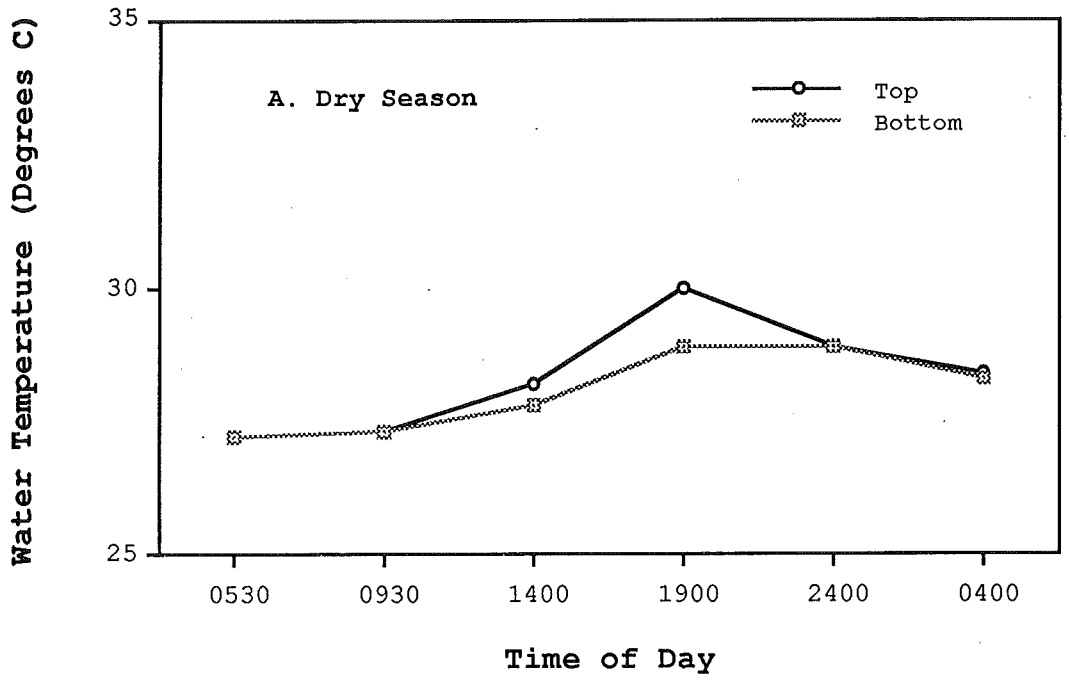


Figure 1. Total monthly rainfall at the experimental ponds for 1985.



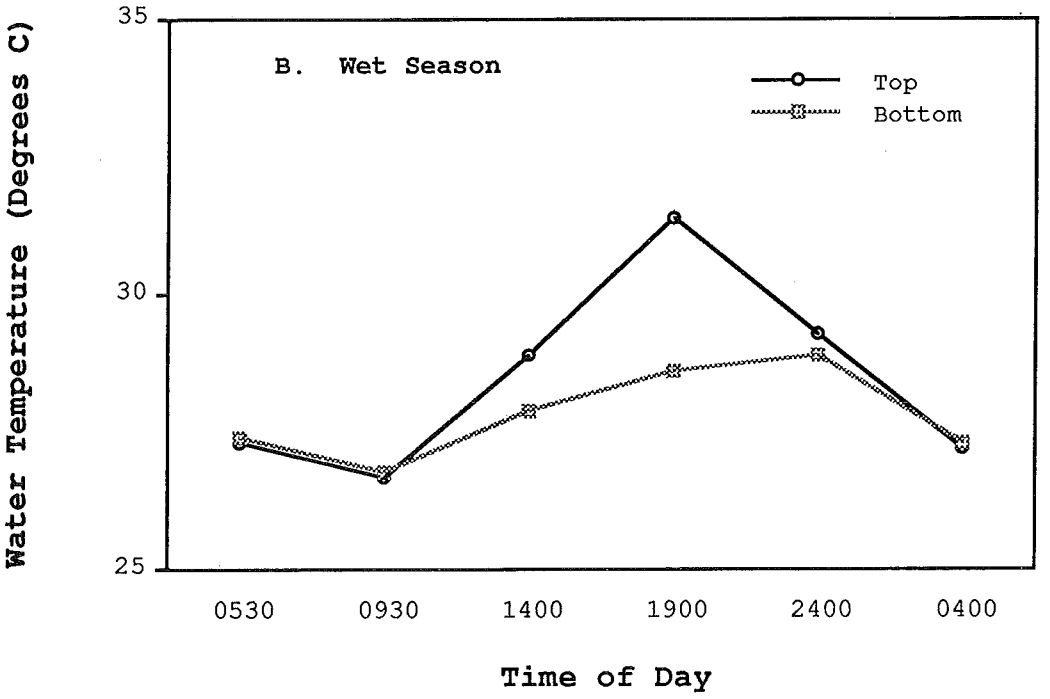


Figure 2. Diel changes in the mean of monthly surface and bottom water temperatures for the experimental ponds.

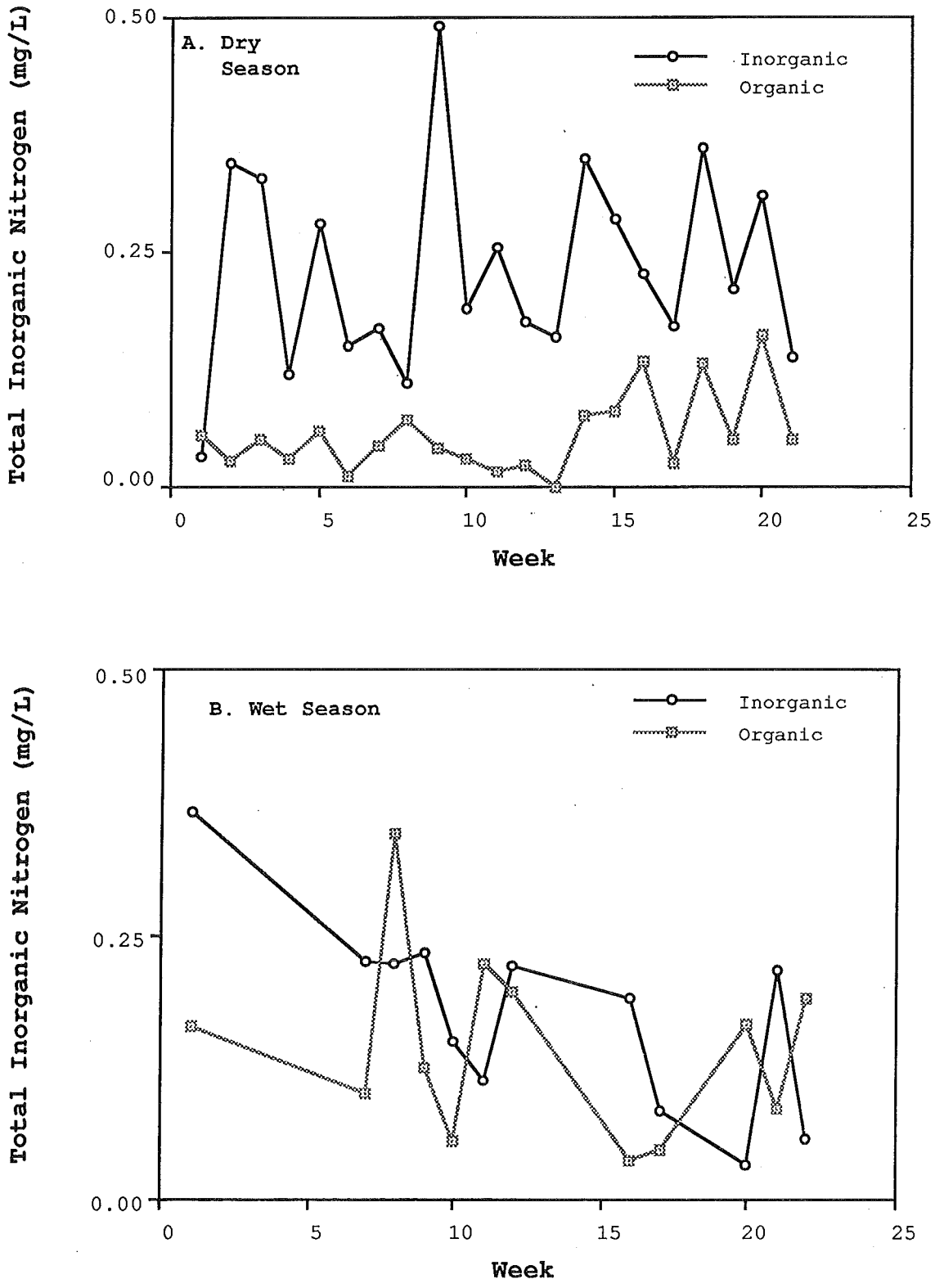


Figure 3. Trends in mean total inorganic nitrogen in the experimental ponds.

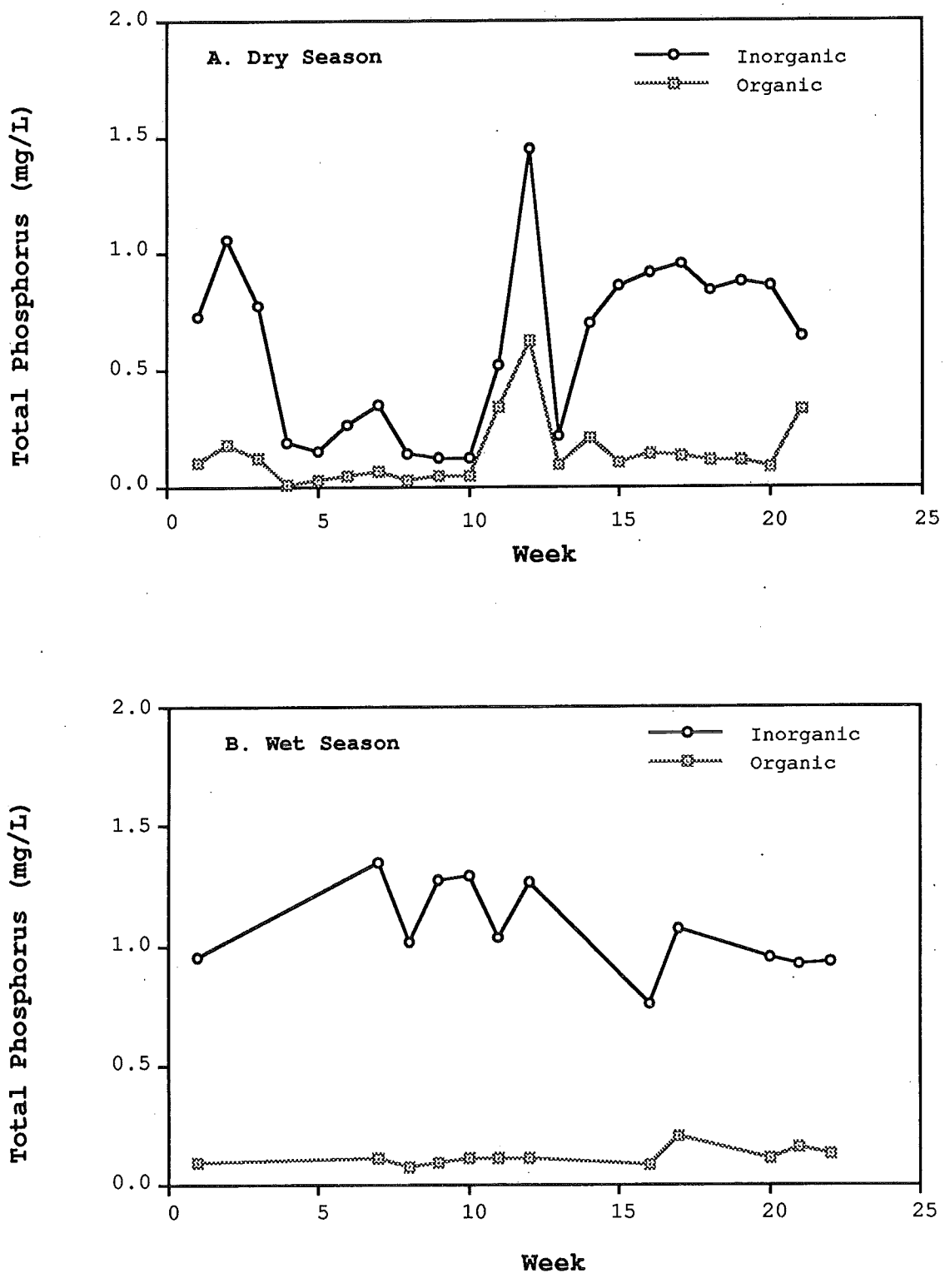


Figure 4. Mean total phosphorus trends in the experimental ponds.

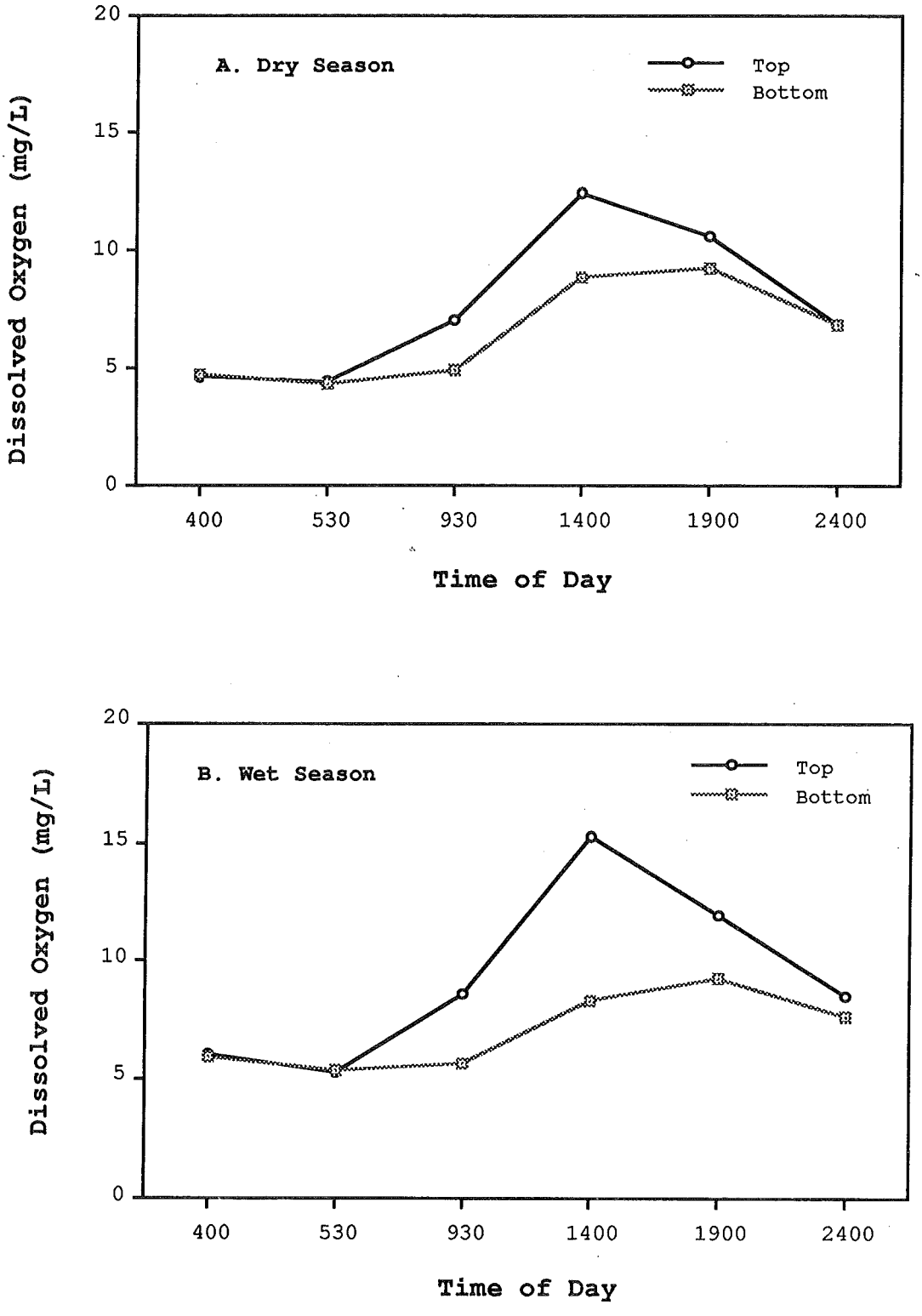


Figure 5. Diel changes in the mean of monthly surface and bottom dissolved oxygen levels for experimental ponds enriched with inorganic fertilizers.

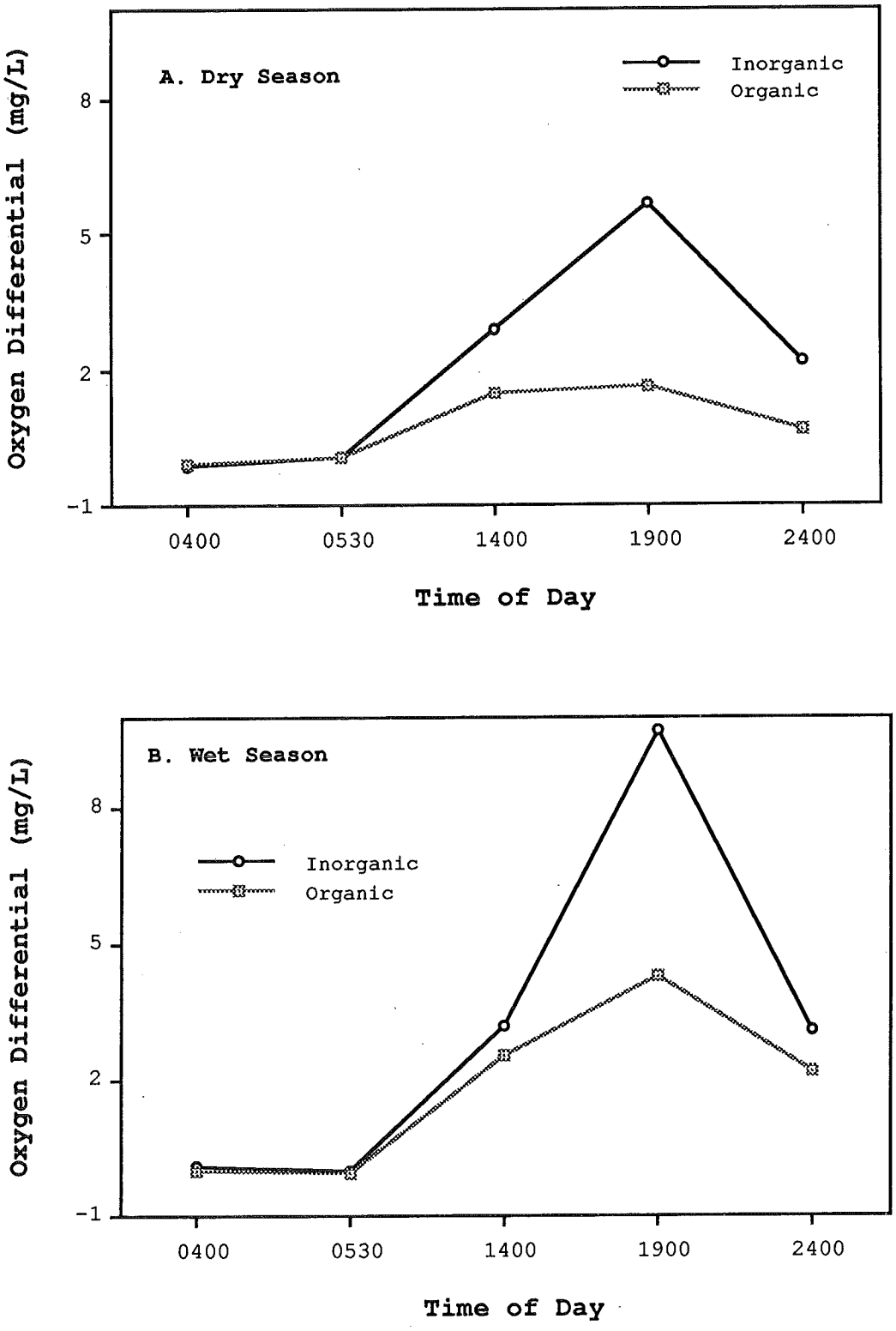
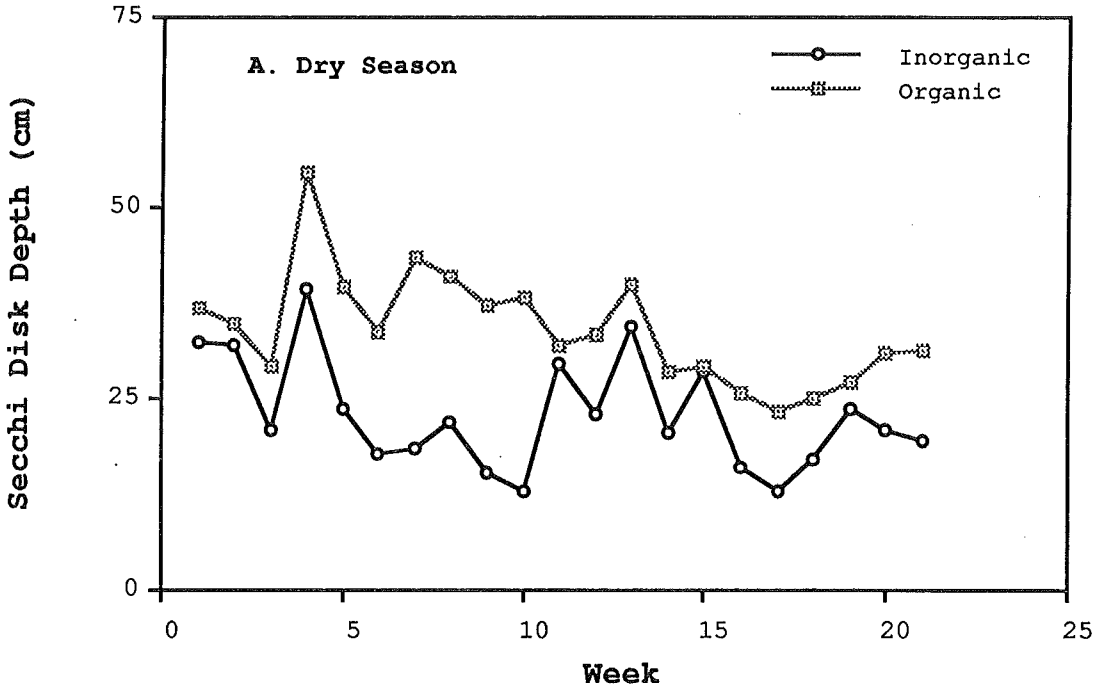


Figure 6. Diel changes in mean oxygen differentials (top vs. bottom) for organically and inorganically fertilized ponds averaged over months and ponds for a treatment.



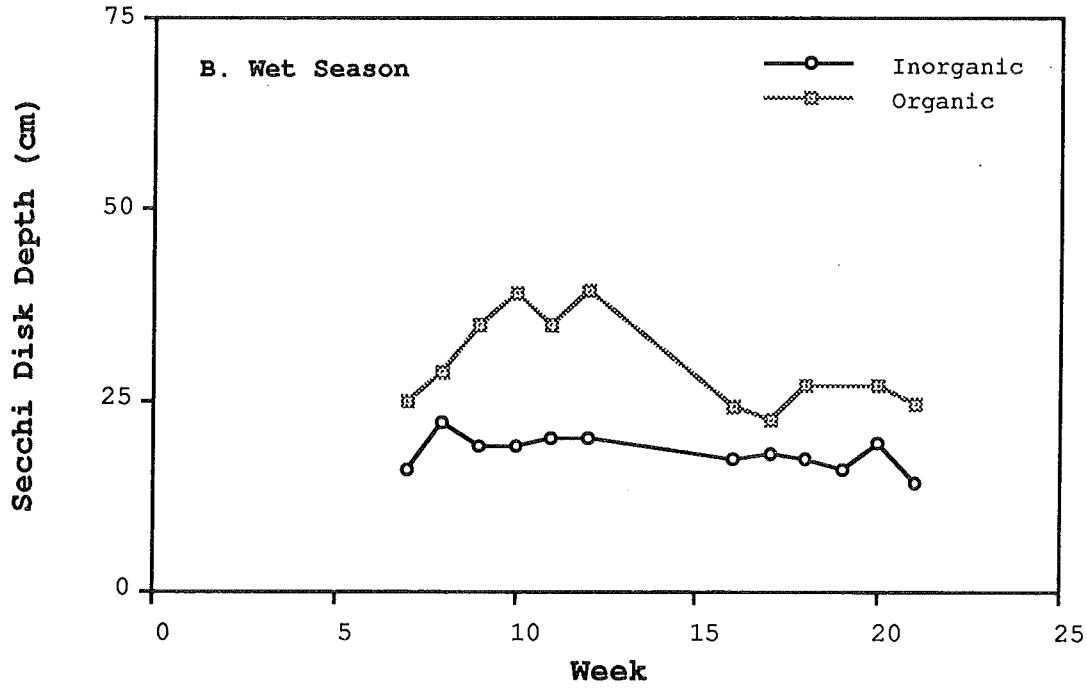


Figure 7. Mean Secchi disk depth trends in the experimental ponds.

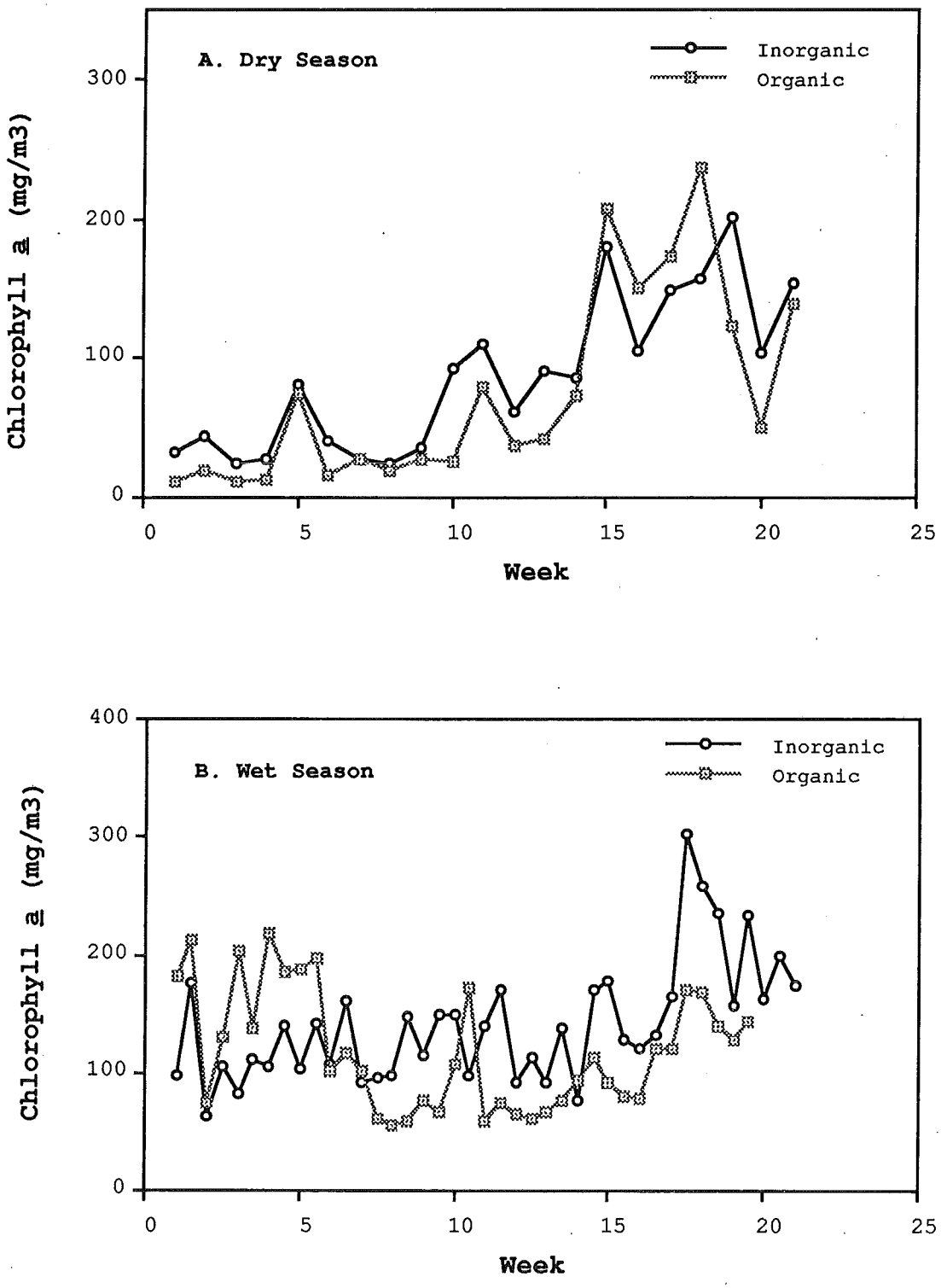


Figure 8. Mean chlorophyll *a* concentrations in the experimental ponds.

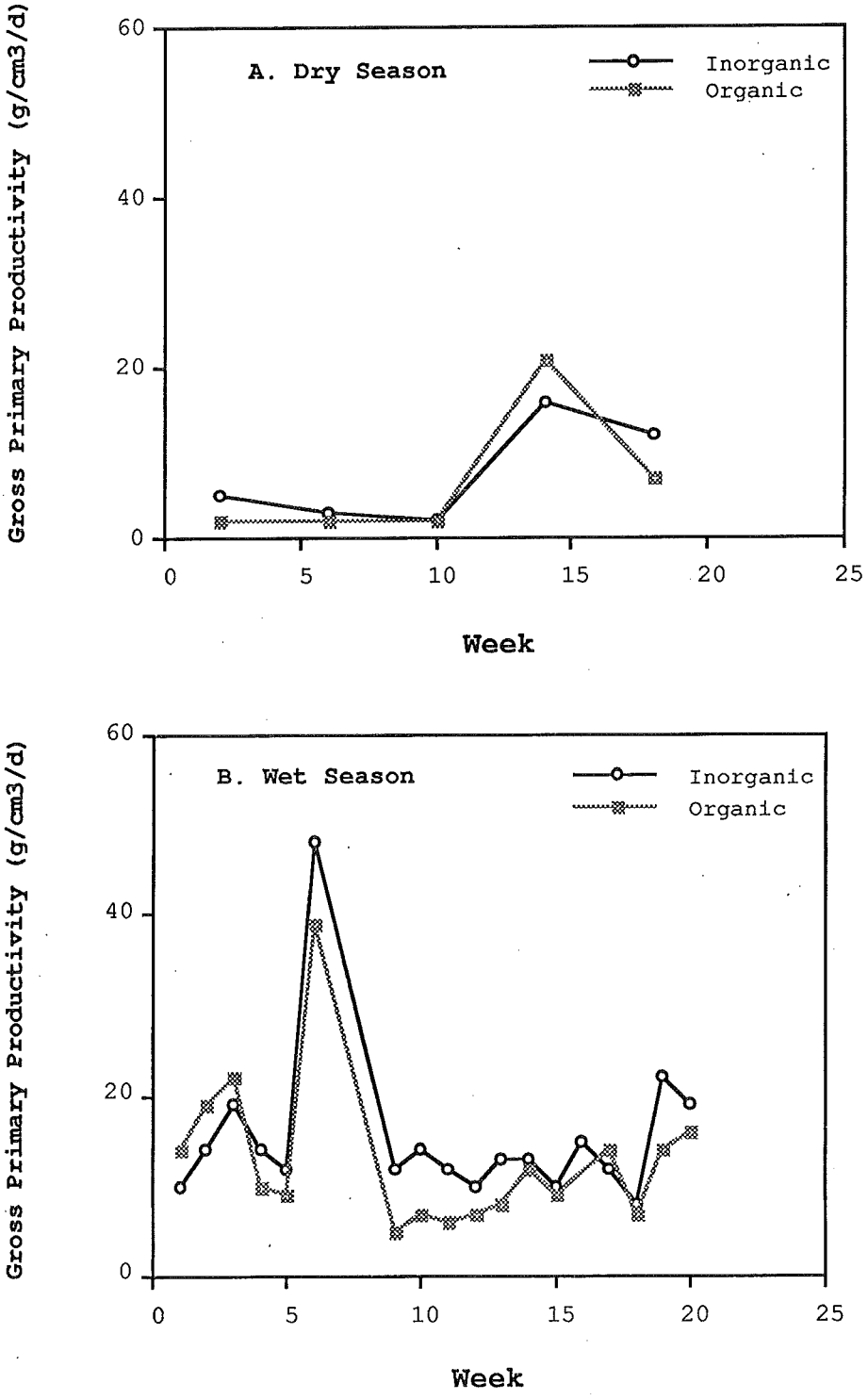
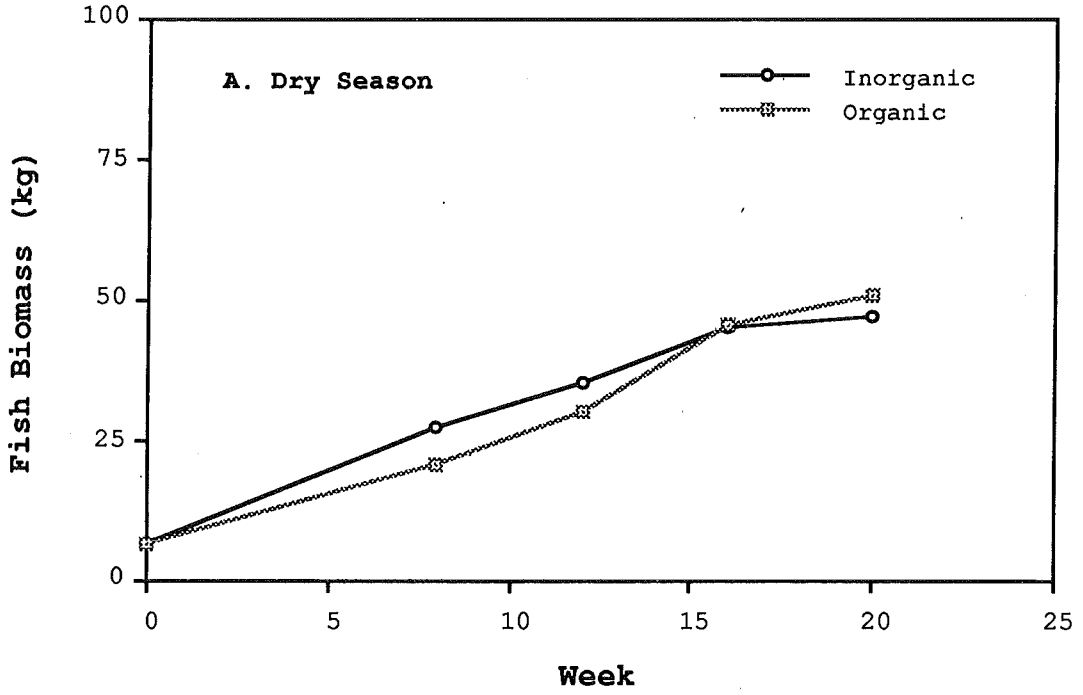


Figure 9. Mean primary productivity values for the experimental ponds.



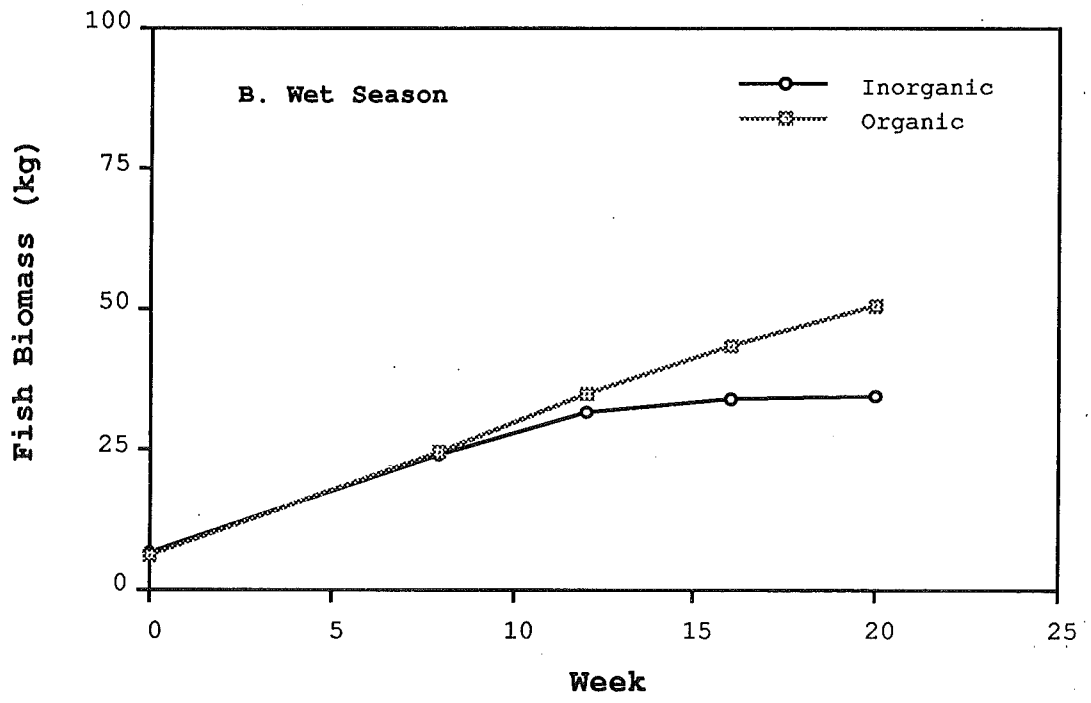


Figure 10. Trends in mean fish biomass in the experimental ponds.

APPENDIX

Complete Set of Data from Cycle II of the Pond/Dynamics Aquaculture CRSP in Ayutthaya, Thailand

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Dry Season 1
Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Wet Season 5

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season 9
Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season 18

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Dry Season 27
Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season 31

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season 41
Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season 47

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Ayutthaya, Thailand, Cycle II, Dry Season 53
Fish/Shrimp Stocking, Sampling, and Harvesting. Ayutthaya, Thailand, Cycle II, Wet Season 54

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
1	2	1985	36.95		0.				
2	2	1985	39.97		0.				
3	2	1985	32.68		0.	5.			2.
4	2	1985	33.38		0.	5.	33.	28.	3.
5	2	1985	42.18		0.	5.	32.	26.	3.
6	2	1985	44.09		0.	3.	31.	25.	5.
7	2	1985	39.84		0.	3.	32.	26.	5.
8	2	1985	36.65		0.	3.	35.5	24.	3.
9	2	1985	37.84		0.	4.	34.	25.	
10	2	1985	31.77		0.	3.	35.	24.	3.
11	2	1985	38.34		0.	5.	32.	21.	3.
12	2	1985	40.05		0.	6.	38.	24.	6.
13	2	1985	45.09		0.	6.	33.	25.	5.
14	2	1985	33.39		0.	5.	34.	27.	6.
15	2	1985	33.38		0.	5.	34.	26.5	6.
16	2	1985	41.71		0.	3.	35.	24.5	6.
17	2	1985	42.28		0.	3.	34.	26.5	6.
18	2	1985	46.3		0.	2.	34.	26.5	6.
19	2	1985	41.43		0.	4.	34.	25.5	6.
20	2	1985	46.7		0.	6.	33.5	26.5	6.
21	2	1985	45.18		0.	5.	38.	25.	10.
22	2	1985	36.92		0.	4.	38.	25.5	9.
23	2	1985	35.48		0.	1.	38.	25.5	5.
24	2	1985	28.37		0.	3.	35.5	25.5	4.
25	2	1985	33.29		0.	6.	35.5	25.5	4.
26	2	1985	45.86		0.	5.	36.	24.	3.
27	2	1985	47.05		0.	4.	35.	25.	3.
28	2	1985	46.07		0.	3.	35.	25.5	3.
1	3	1985	46.84		0.	5.	36.	25.	6.
2	3	1985	48.23		0.	4.	36.	25.	7.
3	3	1985	41.09		0.	1.	35.	24.	7.
4	3	1985	28.88		0.	1.	38.	26.	6.
5	3	1985	42.26		0.	4.	40.	23.	6.
6	3	1985	40.73		0.	3.	38.	27.	5.
7	3	1985	40.88		0.	3.	38.	26.	5.
8	3	1985	46.26		0.	2.	38.	26.	6.
9	3	1985	45.32		0.	3.	38.5	26.	6.
10	3	1985	44.4		0.	2.	39.	27.	5.
11	3	1985	44.43		0.	4.	39.	27.	6.
12	3	1985	43.92		0.	4.	41.	26.	
13	3	1985	42.6		0.	3.	41.	25.	6.
14	3	1985	43.04		0.	4.	40.	28.	6.
15	3	1985	40.43		0.	4.	40.	28.	6.
16	3	1985	39.5		0.	1.	40.	27.	6.
17	3	1985	37.45		0.	2.	41.	28.	6.
18	3	1985	39.36		0.	3.	40.	28.	6.

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
19	3	1985	45.07		0.	3.	40.	28.	6.
20	3	1985	41.24		0.	3.	39.	26.	7.
21	3	1985	37.81		0.	6.	38.	28.	
22	3	1985	29.66		0.	4.	38.	26.	
23	3	1985	39.07		0.	4.	38.	27.	
24	3	1985	38.55		0.	5.	39.	27.	
25	3	1985	40.47		0.	5.	39.	27.	
26	3	1985	46.7		0.	1.	34.	27.	5.
27	3	1985	45.84		0.	6.	42.	28.	
28	3	1985	47.86		0.	1.	40.	26.5	6.
29	3	1985	47.9		0.	5.	47.	26.	6.
30	3	1985	42.77		0.	1.	39.	24.	6.
31	3	1985	20.68		0.3	2.	39.	24.	6.
1	4	1985	46.3		0.	1.	40.	28.	7.
2	4	1985	44.02		0.	3.	39.	27.	
3	4	1985	44.02		0.	4.	39.	27.	5.
4	4	1985	39.16		0.	5.	41.	27.	6.
5	4	1985	29.86		0.	4.	38.	25.5	6.
6	4	1985	41.65		0.	3.	39.	25.5	6.
7	4	1985	46.41		0.	3.	39.	25.5	3.
8	4	1985	47.18		0.	6.	42.	27.	8.
9	4	1985	49.94		0.	4.	42.	27.	
10	4	1985	50.41		0.	3.	42.	29.	
11	4	1985	51.58		0.	5.	42.	29.	
12	4	1985	50.26		0.	9.	42.	29.	
13	4	1985	51.2		0.	7.	42.	29.	
14	4	1985	51.16		0.	6.	42.	29.	
15	4	1985	38.95		0.	3.	42.	29.	4.
16	4	1985	33.19		0.	4.	39.	27.	4.
17	4	1985	22.13		0.	5.	38.	26.	
18	4	1985	50.35		6.4	1.	33.	32.	
19	4	1985	50.76		0.	2.	39.	24.	
20	4	1985	49.38		0.	2.	39.	24.	
21	4	1985	39.7		0.	3.	40.	29.	
22	4	1985	46.63		0.1	3.	43.	30.	
23	4	1985	45.32		0.	2.	41.	27.	4.
24	4	1985	32.44		0.	2.	38.	26.5	4.
25	4	1985	32.29		0.6	4.	38.	26.5	
26	4	1985	34.41		0.	5.	37.	26.	
27	4	1985	30.79		3.	1.	40.	26.	
28	4	1985	33.38		0.	1.	40.	22.	
29	4	1985	28.92		0.1	1.	38.5	28.5	4.
30	4	1985	35.22		0.6	1.	37.	25.	
1	5	1985	41.57		0.8	5.	38.	25.	
2	5	1985	47.19		0.	5.	42.	26.	
3	5	1985	48.		0.	1.	42.	27.	6.
4	5	1985	46.85		0.	3.	39.	27.	

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
5	5	1985	51.42		0.	2.	43.	27.	
6	5	1985	49.15		0.	1.	42.	27.	
7	5	1985	27.76		0.	1.	42.	26.	
8	5	1985	43.55		0.2	1.	43.	25.	
9	5	1985	55.45		0.	1.	41.	25.	6.
10	5	1985	30.03		0.7	2.	41.	26.	9.
11	5	1985			0.	1.	40.	25.	4.
12	5	1985	55.36		0.	1.	39.	26.	2.
13	5	1985	44.43		4.2	2.	37.	25.	
14	5	1985	45.78		0.	2.	35.	25.	
15	5	1985	54.15		0.	5.	38.	26.	
16	5	1985	37.88		0.	1.	36.	26.	
17	5	1985			0.	3.	32.	27.	3.
18	5	1985			0.	1.	39.	25.	7.
19	5	1985			0.	1.	39.	25.	6.
20	5	1985			0.	1.	37.	27.	5.
21	5	1985	38.43		0.	2.	35.	26.	5.
22	5	1985	30.88		0.7	1.	35.	26.	5.
23	5	1985	41.28		0.8	5.	34.	27.	7.
24	5	1985	22.88		0.	5.	35.	27.	
25	5	1985	36.32		2.9	4.	34.	26.	
26	5	1985	33.63		0.	2.	35.	27.	
27	5	1985	27.74		0.	3.	34.	26.	
28	5	1985	23.66		1.1	1.	32.	26.	
29	5	1985	19.73		0.	3.	33.	26.	
30	5	1985	28.95		0.	3.	33.	26.	
31	5	1985			0.4	1.	38.	26.	
1	6	1985			0.	1.	34.	27.	
2	6	1985			0.	1.	35.	26.	
3	6	1985			0.	3.	34.	26.	
4	6	1985	41.51		2.2	1.	34.	27.	5.
5	6	1985	30.27		0.	1.	34.	27.	6.
6	6	1985	43.3		0.	1.	34.	27.	8.
7	6	1985	37.72		0.	1.	34.	27.	8.
8	6	1985	50.66		0.	1.	35.	28.	5.
9	6	1985	38.72		0.	1.	34.	27.	5.
10	6	1985	37.39		0.	2.	35.	27.	6.
11	6	1985	40.01		0.	1.	33.	25.	6.
12	6	1985	32.35		0.3	3.	34.	25.	5.
13	6	1985	20.93		0.5	5.	33.5	25.	
14	6	1985	18.91		0.5	1.	32.	26.	
15	6	1985	32.69		0.	1.	34.	28.	3.
16	6	1985	41.99		0.	1.	34.	28.	5.
17	6	1985	25.13		0.	1.	34.	28.	5.
18	6	1985	30.11		0.	5.	32.	26.	
19	6	1985	31.32		0.	5.	32.	27.	
20	6	1985	22.75		0.	5.	31.5	26.5	

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN	EVAP
21	6	1985	25.39		0.	1.	30.	26.	2.
22	6	1985	38.38		0.	1.	29.	26.	
23	6	1985	31.94		0.	1.	33.	27.	
24	6	1985	27.21		3.4	2.	32.5	26.5	
25	6	1985	25.42		0.	1.	32.	27.5	4.
26	6	1985	30.35		0.	1.	32.	27.	6.
27	6	1985	31.76		0.	1.	32.5	26.	6.
28	6	1985	22.18		0.	1.	32.5	26.5	

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN
1	8	1985	35.18		0.	1.	32.	25.
2	8	1985	38.93		0.	1.	33.	25.5
3	8	1985	36.04		0.	1.	32.5	26.
4	8	1985	45.54		38.	1.	33.	26.
5	8	1985	43.14		0.	1.	34.	26.
6	8	1985	33.78		7.	1.	33.	25.
7	8	1985	26.39		0.	2.	33.	26.
8	8	1985	35.82		0.	3.	32.5	26.
9	8	1985	36.23		0.	2.	32.5	26.
10	8	1985	36.23		0.	2.	32.5	26.
11	8	1985	35.03		0.	1.	33.5	27.
12	8	1985	26.91		0.	2.	32.	26.
13	8	1985	41.05		0.	3.	33.	26.
14	8	1985	33.24		0.	1.	34.	26.5
15	8	1985	38.05		0.	3.	34.	26.5
16	8	1985	37.34		0.	2.	33.	27.
17	8	1985	41.37		0.	1.	33.5	26.5
18	8	1985	39.14		0.	1.	34.	27.
19	8	1985	35.24		0.	1.	34.5	27.
20	8	1985	39.5		12.	1.	34.	27.
21	8	1985	33.12		0.	3.	34.5	26.
22	8	1985	21.2		17.	2.	32.5	27.5
23	8	1985	33.6		0.	1.	32.5	27.5
24	8	1985	30.97		0.	1.	33.	27.
25	8	1985	31.83		0.	3.	34.	26.
26	8	1985	25.51		0.	5.	33.	25.5
27	8	1985	22.47		5.	2.	32.5	25.5
28	8	1985	19.2		27.	5.	32.	26.
29	8	1985	25.92		0.	3.	31.	26.
30	8	1985	31.99		8.	1.	33.	26.
31	8	1985	32.26		0.	1.	33.	26.5
1	9	1985	37.54		0.	1.	34.5	26.
2	9	1985	34.22		21.7	3.	34.	25.5
3	9	1985	34.57		4.	2.	34.	26.
4	9	1985	34.53		18.	1.	34.	26.5
5	9	1985	31.02		0.	1.	35.	26.
6	9	1985	32.84		7.	1.	33.	25.
7	9	1985	29.99		0.	1.	34.	26.
8	9	1985	16.71		0.	1.	34.5	25.5
9	9	1985	30.67		0.	1.	33.	25.
10	9	1985	27.93		0.	1.	33.5	25.5
11	9	1985	34.91		0.	1.	34.	25.5
12	9	1985	30.31		2.	1.	34.5	25.5
13	9	1985	24.39		1.	1.	33.	26.
14	9	1985	24.77		0.	1.	33.	26.
15	9	1985	20.35		2.	2.	32.	25.

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN
16	9	1985	24.33		0.	1.	32.	25.
17	9	1985	21.05		100.	1.	31.	25.
18	9	1985	24.79		9.	1.	31.	24.
19	9	1985	34.33		40.	1.	31.5	24.5
20	9	1985	29.67		32.	1.	32.5	24.5
21	9	1985	23.14		0.	1.	32.	26.
22	9	1985	28.85		0.	1.	32.	26.
23	9	1985	24.56		20.	1.	28.	26.
24	9	1985	14.29		16.	1.	33.	24.
25	9	1985	31.13		0.	1.	33.	25.
26	9	1985	30.36		0.	1.	33.5	25.5
27	9	1985	36.77		0.	2.	33.	25.
28	9	1985	27.6		0.	1.	34.5	26.5
29	9	1985	33.67		0.	2.	34.5	26.5
30	9	1985	33.81		0.	1.	34.5	26.5
1	10	1985	31.45		0.	1.	29.	26.5
2	10	1985	32.4		17.	1.	34.	26.5
3	10	1985	27.85		0.	4.	29.	27.
4	10	1985	26.88		0.	1.	32.	25.5
5	10	1985	23.21		0.	1.	30.5	26.5
6	10	1985	29.18		0.	1.	32.	27.5
7	10	1985	21.05		0.	1.	32.	27.
8	10	1985	17.72		0.	2.	30.	26.
9	10	1985	32.74		0.	1.	31.	27.
10	10	1985	21.58		0.	1.	33.	27.
11	10	1985	32.63		29.	2.	32.5	26.
12	10	1985	15.7		0.	1.	30.	26.
13	10	1985	17.53		0.	1.	30.5	26.
14	10	1985	13.84		31.	1.	33.	24.5
15	10	1985	33.3		5.	1.	29.5	25.5
16	10	1985	25.42		0.	1.	32.	26.5
17	10	1985	23.51		0.	1.	32.5	26.5
18	10	1985	21.77		28.	1.	32.	25.5
19	10	1985	29.19		0.	1.	32.5	26.
20	10	1985	31.97		0.	1.	32.	26.
21	10	1985	20.59		14.	1.	33.5	25.5
22	10	1985	8.87		0.	1.	30.	25.
23	10	1985	31.27		0.	1.	32.	24.
24	10	1985	33.07		6.	2.	33.	26.
25	10	1985	35.42		0.	2.	33.	26.
26	10	1985	36.3		0.	2.	33.	26.
27	10	1985	31.67		0.	2.	33.5	26.5
28	10	1985	18.61		4.	1.	33.5	26.5
29	10	1985	29.93		0.	1.	32.5	26.5
30	10	1985	36.77		0.	1.	33.5	26.
31	10	1985	30.19		4.	1.	33.	26.
1	11	1985	36.52		3.	1.	33.	24.

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN
2	11	1985	38.38		0.	1.	32.5	25.
3	11	1985	35.4		0.	1.	33.	25.5
4	11	1985	31.4		0.	1.	32.	25.
5	11	1985	35.23		0.	1.	32.5	25.5
6	11	1985	33.17		0.	1.	32.	26.
7	11	1985	36.57		0.	3.	32.5	26.
8	11	1985	35.06		0.	1.	32.	25.5
9	11	1985	32.03		0.	1.	33.	26.
10	11	1985	25.53		0.	1.	33.5	26.5
11	11	1985	25.93		0.	1.	34.	26.
12	11	1985	20.5		6.	1.	32.	26.
13	11	1985	19.52		0.	3.	32.	26.
14	11	1985	15.92		8.	1.	32.	25.
15	11	1985	29.55		13.	1.	33.	25.
16	11	1985	22.97		0.	1.	32.	25.5
17	11	1985	32.83		0.	1.	33.	25.
18	11	1985	33.57		0.	1.	31.	25.5
19	11	1985	33.3		0.	1.	32.5	25.5
20	11	1985	25.87		0.	1.	32.5	26.5
21	11	1985	34.99		0.	1.	32.	25.5
22	11	1985	34.48		0.	0.		
23	11	1985	35.		0.	0.		
24	11	1985	34.45		0.	0.		
25	11	1985	32.95		0.	1.	32.5	23.
26	11	1985	21.19		0.	3.	31.5	23.5
27	11	1985	24.33		0.	1.	30.5	23.5
28	11	1985	21.07		0.	1.	32.5	26.
29	11	1985	14.66		15.	1.	31.5	23.5
30	11	1985	34.61		0.	1.	31.5	23.5
1	12	1985	34.99		0.	1.	32.5	23.5
2	12	1985	33.7		0.	1.	32.	23.5
3	12	1985	35.02		0.	1.	32.5	23.
4	12	1985	34.55		0.	1.	32.	23.
5	12	1985	34.32		0.	1.	33.	24.
6	12	1985	34.33		0.	1.	32.5	25.
7	12	1985	34.2		0.	1.	32.5	25.5
8	12	1985	34.41		0.	1.	33.	26.
9	12	1985	33.75		0.	1.	33.	23.
10	12	1985	33.87		0.	1.	33.	23.
11	12	1985	33.99		0.	1.	32.5	24.
12	12	1985	33.4		0.	1.	33.	24.
13	12	1985	33.99		0.	1.	32.	23.
14	12	1985	33.67		0.	1.	31.5	20.
15	12	1985	33.94		0.	1.	32.	20.5
16	12	1985	32.57		0.	1.	34.	18.
17	12	1985	33.83		0.	3.	32.	22.5
18	12	1985	31.81		0.	2.	27.	17.5

Table 1. Daily Weather Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	SOLAR1	SOLAR2	RAIN	WIND	ATEMPMAX	ATEMPMIN
19	12	1985	32.56		0.	2.	29.5	19.
20	12	1985	33.87		0.	1.	30.	18.
21	12	1985	33.68		0.	1.	30.	19.5
22	12	1985	33.31		0.	1.	31.	20.
23	12	1985	33.5		0.	1.	31.	19.

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
1	2	1985	12	0.83	6	2	1985	8	0.91	12	2	1985	7	0.86
1	2	1985	2	0.87	6	2	1985	9	0.91	12	2	1985	8	0.86
1	2	1985	3	0.85	7	2	1985	12	0.86	12	2	1985	9	0.73
1	2	1985	4	0.83	7	2	1985	2	0.89	13	2	1985	12	0.73
1	2	1985	5	0.86	7	2	1985	3	0.84	13	2	1985	2	0.83
1	2	1985	7	0.91	7	2	1985	4	0.88	13	2	1985	3	0.7
1	2	1985	8	0.87	7	2	1985	5	0.91	13	2	1985	4	0.79
1	2	1985	9	0.85	7	2	1985	7	0.89	13	2	1985	5	0.85
2	2	1985	12	0.8	7	2	1985	8	0.91	13	2	1985	7	0.86
2	2	1985	2	0.86	7	2	1985	9	0.89	13	2	1985	8	0.84
2	2	1985	3	0.83	8	2	1985	12	0.84	13	2	1985	9	0.7
2	2	1985	4	0.83	8	2	1985	2	0.88	14	2	1985	12	0.7
2	2	1985	5	0.85	8	2	1985	3	0.82	14	2	1985	2	0.82
2	2	1985	7	0.9	8	2	1985	4	0.87	14	2	1985	3	0.68
2	2	1985	8	0.86	8	2	1985	5	0.9	14	2	1985	4	0.78
2	2	1985	9	0.83	8	2	1985	7	0.88	14	2	1985	5	0.84
3	2	1985	12	0.79	8	2	1985	8	0.89	14	2	1985	7	0.85
3	2	1985	2	0.85	8	2	1985	9	0.84	14	2	1985	8	0.84
3	2	1985	3	0.8	9	2	1985	12	0.8	14	2	1985	9	0.68
3	2	1985	4	0.82	9	2	1985	2	0.79	15	2	1985	12	0.69
3	2	1985	5	0.84	9	2	1985	3	0.86	15	2	1985	2	0.82
3	2	1985	7	0.89	9	2	1985	4	0.88	15	2	1985	3	0.68
3	2	1985	8	0.86	9	2	1985	5	0.88	15	2	1985	4	0.76
3	2	1985	9	0.8	9	2	1985	7	0.89	15	2	1985	5	0.83
4	2	1985	12	0.78	9	2	1985	8	0.8	15	2	1985	7	0.85
4	2	1985	2	0.85	9	2	1985	9	0.8	15	2	1985	8	0.84
4	2	1985	3	0.79	10	2	1985	12	0.8	15	2	1985	9	0.67
4	2	1985	4	0.8	10	2	1985	2	0.86	16	2	1985	12	0.88
4	2	1985	5	0.84	10	2	1985	3	0.76	16	2	1985	2	0.81
4	2	1985	7	0.89	10	2	1985	4	0.84	16	2	1985	3	0.76
4	2	1985	8	0.85	10	2	1985	5	0.87	16	2	1985	4	0.93
4	2	1985	9	0.78	10	2	1985	7	0.88	16	2	1985	5	0.81
5	2	1985	12	0.9	10	2	1985	8	0.88	16	2	1985	7	0.84
5	2	1985	2	0.91	10	2	1985	9	0.77	16	2	1985	8	0.82
5	2	1985	3	0.9	11	2	1985	12	0.77	16	2	1985	9	0.82
5	2	1985	4	0.9	11	2	1985	2	0.85	17	2	1985	12	0.87
5	2	1985	5	0.93	11	2	1985	3	0.76	17	2	1985	2	0.8
5	2	1985	7	0.9	11	2	1985	4	0.83	17	2	1985	3	0.76
5	2	1985	8	0.91	11	2	1985	5	0.87	17	2	1985	4	0.92
5	2	1985	9	0.91	11	2	1985	7	0.88	17	2	1985	5	0.8
6	2	1985	12	0.88	11	2	1985	8	0.83	17	2	1985	7	0.83
6	2	1985	2	0.9	11	2	1985	9	0.76	17	2	1985	8	0.8
6	2	1985	3	0.87	12	2	1985	12	0.75	17	2	1985	9	0.78
6	2	1985	4	0.9	12	2	1985	2	0.85	18	2	1985	12	0.86
6	2	1985	5	0.92	12	2	1985	3	0.72	18	2	1985	2	0.78
6	2	1985	7	0.9	12	2	1985	4	0.81	18	2	1985	3	0.75
					12	2	1985	5	0.86	18	2	1985	4	0.9

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
18	2	1985	5	0.78	24	2	1985	4	0.87	2	3	1985	3	0.9
18	2	1985	7	0.83	24	2	1985	5	0.94	2	3	1985	4	0.8
18	2	1985	8	0.8	24	2	1985	7	0.96	2	3	1985	5	0.89
18	2	1985	9	0.78	24	2	1985	8	0.9	2	3	1985	7	0.92
19	2	1985	12	0.83	24	2	1985	9	0.89	2	3	1985	8	0.84
19	2	1985	2	0.78	25	2	1985	12	0.88	2	3	1985	9	0.72
19	2	1985	3	0.71	25	2	1985	2	0.93	3	3	1985	12	0.7
19	2	1985	4	0.89	25	2	1985	3	0.78	3	3	1985	2	0.86
19	2	1985	5	0.78	25	2	1985	4	0.87	3	3	1985	3	0.88
19	2	1985	7	0.83	25	2	1985	5	0.94	3	3	1985	4	0.79
19	2	1985	8	0.8	25	2	1985	7	0.96	3	3	1985	5	0.87
19	2	1985	9	0.75	25	2	1985	8	0.89	3	3	1985	7	0.9
20	2	1985	12	0.97	25	2	1985	9	0.88	3	3	1985	8	0.83
20	2	1985	2	0.77	26	2	1985	12	0.86	3	3	1985	9	0.62
20	2	1985	3	0.69	26	2	1985	2	0.92	4	3	1985	12	0.69
20	2	1985	4	0.87	26	2	1985	3	0.76	4	3	1985	2	0.85
20	2	1985	5	0.78	26	2	1985	4	0.86	4	3	1985	3	0.87
20	2	1985	7	0.83	26	2	1985	5	0.92	4	3	1985	4	0.77
20	2	1985	8	0.78	26	2	1985	7	0.96	4	3	1985	5	0.86
20	2	1985	9	0.94	26	2	1985	8	0.88	4	3	1985	7	0.9
21	2	1985	12	0.98	26	2	1985	9	0.88	4	3	1985	8	0.82
21	2	1985	2	0.76	27	2	1985	12	0.84	4	3	1985	9	0.67
21	2	1985	3	0.68	27	2	1985	2	0.9	5	3	1985	12	0.68
21	2	1985	4	0.85	27	2	1985	3	1.1	5	3	1985	2	0.84
21	2	1985	5	0.77	27	2	1985	4	0.85	5	3	1985	3	0.84
21	2	1985	7	0.82	27	2	1985	5	0.9	5	3	1985	4	0.76
21	2	1985	8	0.77	27	2	1985	7	0.96	5	3	1985	5	0.85
21	2	1985	9	0.97	27	2	1985	8	0.87	5	3	1985	7	0.89
22	2	1985	12	0.96	27	2	1985	9	0.88	5	3	1985	8	0.8
22	2	1985	2	0.76	28	2	1985	12	0.8	5	3	1985	9	0.67
22	2	1985	3	0.65	28	2	1985	2	0.9	6	3	1985	12	0.66
22	2	1985	4	0.84	28	2	1985	3	1.02	6	3	1985	2	0.83
22	2	1985	5	0.77	28	2	1985	4	0.82	6	3	1985	3	0.8
22	2	1985	7	0.82	28	2	1985	5	0.9	6	3	1985	4	0.76
22	2	1985	8	0.77	28	2	1985	7	0.94	6	3	1985	5	0.85
22	2	1985	9	0.94	28	2	1985	8	0.86	6	3	1985	7	0.89
23	2	1985	12	0.95	28	2	1985	9	0.87	6	3	1985	8	0.8
23	2	1985	2	0.95	1	3	1985	12	0.76	6	3	1985	9	0.64
23	2	1985	3	0.82	1	3	1985	2	0.88	7	3	1985	12	0.64
23	2	1985	4	0.88	1	3	1985	3	0.95	7	3	1985	2	0.82
23	2	1985	5	0.95	1	3	1985	4	0.81	7	3	1985	3	0.79
23	2	1985	7	0.98	1	3	1985	5	0.9	7	3	1985	4	0.76
23	2	1985	8	0.91	1	3	1985	7	0.93	7	3	1985	5	0.85
23	2	1985	9	0.91	1	3	1985	8	0.85	7	3	1985	7	0.88
24	2	1985	12	0.92	1	3	1985	9	0.76	7	3	1985	8	0.8
24	2	1985	2	0.94	2	3	1985	12	0.72	7	3	1985	9	0.62
24	2	1985	3	0.79	2	3	1985	2	0.87	8	3	1985	12	0.61

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
8	3	1985	2	0.81	14	3	1985	12	0.53	19	3	1985	9	0.44
8	3	1985	3	0.76	14	3	1985	2	0.76	20	3	1985	12	0.7
8	3	1985	4	0.73	14	3	1985	3	0.61	20	3	1985	2	0.7
8	3	1985	5	0.82	14	3	1985	4	0.66	20	3	1985	3	0.49
8	3	1985	7	0.88	14	3	1985	5	0.76	20	3	1985	4	0.6
8	3	1985	8	0.79	14	3	1985	7	0.8	20	3	1985	5	0.7
8	3	1985	9	0.6	14	3	1985	8	0.71	20	3	1985	7	0.66
9	3	1985	12	0.6	14	3	1985	9	0.5	20	3	1985	8	0.68
9	3	1985	2	0.8	15	3	1985	12	0.54	20	3	1985	9	0.45
9	3	1985	3	0.73	15	3	1985	2	0.74	21	3	1985	12	0.92
9	3	1985	4	0.73	15	3	1985	3	0.59	21	3	1985	2	0.91
9	3	1985	5	0.81	15	3	1985	4	0.65	21	3	1985	3	0.87
9	3	1985	7	0.86	15	3	1985	5	0.75	21	3	1985	4	0.93
9	3	1985	8	0.79	15	3	1985	7	0.79	21	3	1985	5	0.91
9	3	1985	9	0.56	15	3	1985	8	0.71	21	3	1985	7	0.91
10	3	1985	12	0.59	15	3	1985	9	0.49	21	3	1985	8	0.91
10	3	1985	2	0.8	16	3	1985	12	0.52	21	3	1985	9	0.88
10	3	1985	3	0.7	16	3	1985	2	0.73	22	3	1985	12	0.88
10	3	1985	4	0.71	16	3	1985	3	0.57	22	3	1985	2	0.9
10	3	1985	5	0.8	16	3	1985	4	0.64	22	3	1985	3	0.84
10	3	1985	7	0.86	16	3	1985	5	0.74	22	3	1985	4	0.91
10	3	1985	8	0.77	16	3	1985	7	0.76	22	3	1985	5	0.9
10	3	1985	9	0.56	16	3	1985	8	0.72	22	3	1985	7	0.88
11	3	1985	12	0.57	16	3	1985	9	0.49	22	3	1985	8	0.89
11	3	1985	2	0.79	17	3	1985	12	0.5	22	3	1985	9	0.85
11	3	1985	3	0.68	17	3	1985	2	0.74	23	3	1985	12	0.85
11	3	1985	4	0.7	17	3	1985	3	0.54	23	3	1985	2	0.88
11	3	1985	5	0.79	17	3	1985	4	0.63	23	3	1985	3	0.81
11	3	1985	7	0.85	17	3	1985	5	0.72	23	3	1985	4	0.9
11	3	1985	8	0.76	17	3	1985	7	0.73	23	3	1985	5	0.89
11	3	1985	9	0.55	17	3	1985	8	0.7	23	3	1985	7	0.87
12	3	1985	12	0.56	17	3	1985	9	0.47	23	3	1985	8	0.87
12	3	1985	2	0.78	18	3	1985	12	0.45	23	3	1985	9	0.82
12	3	1985	3	0.65	18	3	1985	2	0.72	24	3	1985	12	0.82
12	3	1985	4	0.7	18	3	1985	3	0.53	24	3	1985	2	0.87
12	3	1985	5	0.78	18	3	1985	4	0.62	24	3	1985	3	0.78
12	3	1985	7	0.82	18	3	1985	5	0.71	24	3	1985	4	0.88
12	3	1985	8	0.75	18	3	1985	7	0.7	24	3	1985	5	0.88
12	3	1985	9	0.53	18	3	1985	8	0.7	24	3	1985	7	0.87
13	3	1985	12	0.54	18	3	1985	9	0.45	24	3	1985	8	0.86
13	3	1985	2	0.76	19	3	1985	12	0.46	24	3	1985	9	0.79
13	3	1985	3	0.63	19	3	1985	2	0.7	25	3	1985	12	0.81
13	3	1985	4	0.68	19	3	1985	3	0.5	25	3	1985	2	0.87
13	3	1985	5	0.76	19	3	1985	4	0.62	25	3	1985	3	0.76
13	3	1985	7	0.82	19	3	1985	5	0.7	25	3	1985	4	0.86
13	3	1985	8	0.73	19	3	1985	7	0.68	25	3	1985	5	0.86
13	3	1985	9	0.52	19	3	1985	8	0.7	25	3	1985	7	0.86

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
25	3	1985	8	0.85	31	3	1985	7	0.8	7	4	1985	5	0.88
25	3	1985	9	0.77	31	3	1985	8	0.79	7	4	1985	7	0.84
26	3	1985	12	0.78	31	3	1985	9	0.62	7	4	1985	8	0.94
26	3	1985	2	0.86	1	4	1985	12	0.65	7	4	1985	9	0.53
26	3	1985	3	0.72	1	4	1985	2	0.8	8	4	1985	12	0.77
26	3	1985	4	0.84	1	4	1985	3	0.6	8	4	1985	2	0.94
26	3	1985	5	0.85	1	4	1985	4	0.78	8	4	1985	3	0.49
26	3	1985	7	0.85	1	4	1985	5	0.8	8	4	1985	4	0.83
26	3	1985	8	0.84	1	4	1985	7	0.8	8	4	1985	5	0.86
26	3	1985	9	0.74	1	4	1985	8	0.79	8	4	1985	7	0.84
27	3	1985	12	0.75	1	4	1985	9	0.6	8	4	1985	8	0.93
27	3	1985	2	0.84	2	4	1985	12	0.64	8	4	1985	9	0.5
27	3	1985	3	0.7	2	4	1985	2	0.79	9	4	1985	12	0.74
27	3	1985	4	0.83	2	4	1985	3	0.59	9	4	1985	2	0.91
27	3	1985	5	0.84	2	4	1985	4	0.77	9	4	1985	3	0.48
27	3	1985	7	0.84	2	4	1985	5	0.79	9	4	1985	4	0.82
27	3	1985	8	0.83	2	4	1985	7	0.79	9	4	1985	5	0.85
27	3	1985	9	0.72	2	4	1985	8	0.78	9	4	1985	7	0.82
28	3	1985	12	0.74	2	4	1985	9	0.59	9	4	1985	8	0.91
28	3	1985	2	0.83	4	4	1985	12	0.89	9	4	1985	9	0.5
28	3	1985	3	0.68	4	4	1985	2	0.98	10	4	1985	12	0.75
28	3	1985	4	0.82	4	4	1985	3	0.54	10	4	1985	2	0.9
28	3	1985	5	0.82	4	4	1985	4	0.89	10	4	1985	3	0.45
28	3	1985	7	0.83	4	4	1985	5	0.9	10	4	1985	4	0.8
28	3	1985	8	0.81	4	4	1985	7	0.88	10	4	1985	5	0.84
28	3	1985	9	0.78	4	4	1985	8	0.99	10	4	1985	7	0.81
29	3	1985	12	0.7	4	4	1985	9	0.56	10	4	1985	8	0.89
29	3	1985	2	0.81	5	4	1985	12	0.86	10	4	1985	9	0.49
29	3	1985	3	0.65	5	4	1985	2	0.96	11	4	1985	12	1.
29	3	1985	4	0.8	5	4	1985	3	0.53	11	4	1985	2	0.91
29	3	1985	5	0.81	5	4	1985	4	0.85	11	4	1985	3	0.94
29	3	1985	7	0.8	5	4	1985	5	0.9	11	4	1985	4	1.02
29	3	1985	8	0.8	5	4	1985	7	0.86	11	4	1985	5	0.96
29	3	1985	9	0.66	5	4	1985	8	0.96	11	4	1985	7	1.
30	3	1985	12	0.69	5	4	1985	9	0.53	11	4	1985	8	0.94
30	3	1985	2	0.81	6	4	1985	12	0.81	11	4	1985	9	0.94
30	3	1985	3	0.64	6	4	1985	2	0.95	12	4	1985	12	0.99
30	3	1985	4	0.79	6	4	1985	3	0.51	12	4	1985	2	0.91
30	3	1985	5	0.81	6	4	1985	4	0.85	12	4	1985	3	0.92
30	3	1985	7	0.8	6	4	1985	5	0.89	12	4	1985	4	1.
30	3	1985	8	0.8	6	4	1985	7	0.84	12	4	1985	5	0.95
30	3	1985	9	0.64	6	4	1985	8	0.96	12	4	1985	7	0.99
31	3	1985	12	0.68	6	4	1985	9	0.53	12	4	1985	8	0.93
31	3	1985	2	0.8	7	4	1985	12	0.8	12	4	1985	9	0.91
31	3	1985	3	0.62	7	4	1985	2	0.94	13	4	1985	12	0.94
31	3	1985	4	0.78	7	4	1985	3	0.5	13	4	1985	2	0.9
31	3	1985	5	0.8	7	4	1985	4	0.85	13	4	1985	3	0.9

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
13	4	1985	4	0.98	19	4	1985	3	0.86	25	4	1985	2	0.86
13	4	1985	5	0.93	19	4	1985	4	0.96	25	4	1985	3	0.78
13	4	1985	7	0.97	19	4	1985	5	0.94	25	4	1985	4	0.88
13	4	1985	8	0.91	19	4	1985	7	0.96	25	4	1985	5	0.89
13	4	1985	9	0.89	19	4	1985	8	0.94	25	4	1985	7	0.91
14	4	1985	12	0.91	19	4	1985	9	0.86	25	4	1985	8	0.88
14	4	1985	2	0.89	20	4	1985	12	0.84	25	4	1985	9	0.79
14	4	1985	3	0.87	20	4	1985	2	0.9	26	4	1985	12	0.73
14	4	1985	4	0.96	20	4	1985	3	0.85	26	4	1985	2	0.86
14	4	1985	5	0.91	20	4	1985	4	0.96	26	4	1985	3	0.76
14	4	1985	7	0.96	20	4	1985	5	0.92	26	4	1985	4	0.87
14	4	1985	8	0.89	20	4	1985	7	0.95	26	4	1985	5	0.88
14	4	1985	9	0.86	20	4	1985	8	0.93	26	4	1985	7	0.9
15	4	1985	12	0.88	20	4	1985	9	0.85	26	4	1985	8	0.88
15	4	1985	2	0.87	21	4	1985	12	0.81	26	4	1985	9	0.77
15	4	1985	3	0.85	21	4	1985	2	0.89	27	4	1985	12	0.75
15	4	1985	4	0.94	21	4	1985	3	0.84	27	4	1985	2	0.88
15	4	1985	5	0.89	21	4	1985	4	0.95	27	4	1985	3	0.8
15	4	1985	7	0.94	21	4	1985	5	0.91	27	4	1985	4	0.88
15	4	1985	8	0.88	21	4	1985	7	0.94	27	4	1985	5	0.93
15	4	1985	9	0.84	21	4	1985	8	0.92	27	4	1985	7	0.93
16	4	1985	12	0.86	21	4	1985	9	0.84	27	4	1985	8	0.9
16	4	1985	2	0.85	22	4	1985	12	0.79	27	4	1985	9	0.8
16	4	1985	3	0.84	22	4	1985	2	0.88	28	4	1985	12	0.74
16	4	1985	4	0.92	22	4	1985	3	0.82	28	4	1985	2	0.88
16	4	1985	5	0.88	22	4	1985	4	0.94	28	4	1985	3	0.79
16	4	1985	7	0.92	22	4	1985	5	0.9	28	4	1985	4	0.88
16	4	1985	8	0.86	22	4	1985	7	0.93	28	4	1985	5	0.92
16	4	1985	9	0.8	22	4	1985	8	0.9	28	4	1985	7	0.93
17	4	1985	12	0.82	22	4	1985	9	0.82	28	4	1985	8	0.9
17	4	1985	2	0.82	23	4	1985	12	0.77	28	4	1985	9	0.79
17	4	1985	3	0.81	23	4	1985	2	0.87	29	4	1985	12	0.72
17	4	1985	4	0.9	23	4	1985	3	0.8	29	4	1985	2	0.88
17	4	1985	5	0.87	23	4	1985	4	0.9	29	4	1985	3	0.77
17	4	1985	7	0.9	23	4	1985	5	0.89	29	4	1985	4	0.87
17	4	1985	8	0.86	23	4	1985	7	0.92	29	4	1985	5	0.91
17	4	1985	9	0.8	23	4	1985	8	0.88	29	4	1985	7	0.92
18	4	1985	12	0.89	23	4	1985	9	0.81	29	4	1985	8	0.89
18	4	1985	2	0.92	24	4	1985	12	0.76	29	4	1985	9	0.78
18	4	1985	3	0.89	24	4	1985	2	0.87	30	4	1985	12	0.73
18	4	1985	4	0.98	24	4	1985	3	0.78	30	4	1985	2	0.88
18	4	1985	5	0.95	24	4	1985	4	0.88	30	4	1985	3	0.77
18	4	1985	7	0.98	24	4	1985	5	0.88	30	4	1985	4	0.87
18	4	1985	8	0.94	24	4	1985	7	0.9	30	4	1985	5	0.91
18	4	1985	9	0.88	24	4	1985	8	0.88	30	4	1985	7	0.92
19	4	1985	12	0.86	24	4	1985	9	0.8	30	4	1985	8	0.89
19	4	1985	2	0.91	25	4	1985	12	0.75	30	4	1985	9	0.78

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
1	5	1985	12	0.94	6	5	1985	9	0.88	12	5	1985	8	0.88
1	5	1985	2	0.9	7	5	1985	12	0.87	12	5	1985	9	0.82
1	5	1985	3	0.91	7	5	1985	2	0.91	13	5	1985	12	0.81
1	5	1985	4	0.88	7	5	1985	3	0.79	13	5	1985	2	0.88
1	5	1985	5	0.92	7	5	1985	4	0.8	13	5	1985	3	0.74
1	5	1985	7	0.93	7	5	1985	5	0.86	13	5	1985	4	0.77
1	5	1985	8	0.9	7	5	1985	7	0.87	13	5	1985	5	0.82
1	5	1985	9	1.	7	5	1985	8	0.88	13	5	1985	7	0.82
2	5	1985	12	0.93	7	5	1985	9	0.87	13	5	1985	8	0.88
2	5	1985	2	0.88	8	5	1985	12	0.85	13	5	1985	9	0.81
2	5	1985	3	0.89	8	5	1985	2	0.9	14	5	1985	12	0.99
2	5	1985	4	0.86	8	5	1985	3	0.78	14	5	1985	2	0.97
2	5	1985	5	0.92	8	5	1985	4	0.79	14	5	1985	3	0.92
2	5	1985	7	0.92	8	5	1985	5	0.86	14	5	1985	4	0.8
2	5	1985	8	0.9	8	5	1985	7	0.86	14	5	1985	5	0.83
2	5	1985	9	0.98	8	5	1985	8	0.87	14	5	1985	7	0.88
3	5	1985	12	0.87	8	5	1985	9	0.85	14	5	1985	8	0.92
3	5	1985	2	0.87	9	5	1985	12	0.83	14	5	1985	9	0.85
3	5	1985	3	0.87	9	5	1985	2	0.89	15	5	1985	12	0.97
3	5	1985	4	0.85	9	5	1985	3	0.77	15	5	1985	2	0.92
3	5	1985	5	0.91	9	5	1985	4	0.78	15	5	1985	3	0.78
3	5	1985	7	0.91	9	5	1985	5	0.85	15	5	1985	4	0.82
3	5	1985	8	0.89	9	5	1985	7	0.85	15	5	1985	5	0.88
3	5	1985	9	0.95	9	5	1985	8	0.86	15	5	1985	7	0.87
4	5	1985	12	0.86	9	5	1985	9	0.84	15	5	1985	8	0.92
4	5	1985	2	0.86	10	5	1985	12	0.83	15	5	1985	9	0.84
4	5	1985	3	0.85	10	5	1985	2	0.9	16	5	1985	12	0.96
4	5	1985	4	0.86	10	5	1985	3	0.77	16	5	1985	2	0.91
4	5	1985	5	0.89	10	5	1985	4	0.78	16	5	1985	3	0.77
4	5	1985	7	0.9	10	5	1985	5	0.86	16	5	1985	4	0.82
4	5	1985	8	0.89	10	5	1985	7	0.85	16	5	1985	5	0.86
4	5	1985	9	0.93	10	5	1985	8	0.88	16	5	1985	7	0.86
5	5	1985	12	0.84	10	5	1985	9	0.84	16	5	1985	8	0.91
5	5	1985	2	0.85	11	5	1985	12	0.82	16	5	1985	9	0.83
5	5	1985	3	0.83	11	5	1985	2	0.89	17	5	1985	12	0.96
5	5	1985	4	0.83	11	5	1985	3	0.76	17	5	1985	2	0.9
5	5	1985	5	0.88	11	5	1985	4	0.78	17	5	1985	3	0.76
5	5	1985	7	0.89	11	5	1985	5	0.85	17	5	1985	4	0.81
5	5	1985	8	0.88	11	5	1985	7	0.84	17	5	1985	5	0.86
5	5	1985	9	0.9	11	5	1985	8	0.88	17	5	1985	7	0.85
6	5	1985	12	0.82	11	5	1985	9	0.83	17	5	1985	8	0.91
6	5	1985	2	0.84	12	5	1985	12	0.82	17	5	1985	9	0.81
6	5	1985	3	0.81	12	5	1985	2	0.89	18	5	1985	12	0.97
6	5	1985	4	0.8	12	5	1985	3	0.75	18	5	1985	2	0.9
6	5	1985	5	0.87	12	5	1985	4	0.77	18	5	1985	3	0.9
6	5	1985	7	0.88	12	5	1985	5	0.84	18	5	1985	4	0.96
6	5	1985	8	0.88	12	5	1985	7	0.83	18	5	1985	5	0.86

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
18	5	1985	7	0.85	24	5	1985	5	0.84	30	5	1985	4	0.96
18	5	1985	8	1.03	24	5	1985	7	0.82	30	5	1985	5	0.88
18	5	1985	9	0.93	24	5	1985	8	0.99	30	5	1985	7	0.82
19	5	1985	12	0.95	24	5	1985	9	0.85	30	5	1985	8	1.
19	5	1985	2	0.91	25	5	1985	12	0.89	30	5	1985	9	0.86
19	5	1985	3	0.88	25	5	1985	2	0.91	31	5	1985	12	0.84
19	5	1985	4	0.95	25	5	1985	3	0.85	31	5	1985	2	0.9
19	5	1985	5	0.86	25	5	1985	4	0.99	31	5	1985	3	0.81
19	5	1985	7	0.85	25	5	1985	5	0.88	31	5	1985	4	0.96
19	5	1985	8	1.01	25	5	1985	7	0.84	31	5	1985	5	0.86
19	5	1985	9	0.91	25	5	1985	8	1.02	31	5	1985	7	0.82
20	5	1985	12	0.94	25	5	1985	9	0.88	31	5	1985	8	1.
20	5	1985	2	0.9	26	5	1985	12	0.87	31	5	1985	9	0.84
20	5	1985	3	0.87	26	5	1985	2	0.91	1	6	1985	12	0.83
20	5	1985	4	0.94	26	5	1985	3	0.84	1	6	1985	2	0.89
20	5	1985	5	0.86	26	5	1985	4	1.	1	6	1985	3	0.8
20	5	1985	7	0.86	26	5	1985	5	0.87	1	6	1985	4	0.95
20	5	1985	8	1.	26	5	1985	7	0.83	1	6	1985	5	0.86
20	5	1985	9	0.89	26	5	1985	8	1.01	1	6	1985	7	0.82
21	5	1985	12	0.92	26	5	1985	9	0.87	1	6	1985	8	1.
21	5	1985	2	0.89	27	5	1985	12	0.87	1	6	1985	9	0.84
21	5	1985	3	0.86	27	5	1985	2	0.9	2	6	1985	12	0.82
21	5	1985	4	0.93	27	5	1985	3	0.83	2	6	1985	2	0.89
21	5	1985	5	0.85	27	5	1985	4	0.98	2	6	1985	3	0.79
21	5	1985	7	0.86	27	5	1985	5	0.86	2	6	1985	4	0.93
21	5	1985	8	1.	27	5	1985	7	0.82	2	6	1985	5	0.85
21	5	1985	9	0.88	27	5	1985	8	1.	2	6	1985	7	0.82
22	5	1985	12	0.91	27	5	1985	9	0.86	2	6	1985	8	0.99
22	5	1985	2	0.88	28	5	1985	12	0.88	2	6	1985	9	0.83
22	5	1985	3	0.84	28	5	1985	2	0.91	3	6	1985	12	0.81
22	5	1985	4	1.01	28	5	1985	3	0.83	3	6	1985	2	0.88
22	5	1985	5	0.85	28	5	1985	4	0.98	3	6	1985	3	0.78
22	5	1985	7	0.85	28	5	1985	5	0.88	3	6	1985	4	0.91
22	5	1985	8	0.99	28	5	1985	7	0.82	3	6	1985	5	0.85
22	5	1985	9	0.87	28	5	1985	8	1.01	3	6	1985	7	0.82
23	5	1985	12	0.9	28	5	1985	9	0.86	3	6	1985	8	0.98
23	5	1985	2	0.88	29	5	1985	12	0.87	3	6	1985	9	0.83
23	5	1985	3	0.84	29	5	1985	2	0.9	4	6	1985	12	0.82
23	5	1985	4	1.	29	5	1985	3	0.82	4	6	1985	2	0.9
23	5	1985	5	0.84	29	5	1985	4	0.97	4	6	1985	3	0.79
23	5	1985	7	0.84	29	5	1985	5	0.86	4	6	1985	4	0.94
23	5	1985	8	0.99	29	5	1985	7	0.81	4	6	1985	5	0.88
23	5	1985	9	0.86	29	5	1985	8	1.	4	6	1985	7	0.84
24	5	1985	12	0.88	29	5	1985	9	0.85	4	6	1985	8	1.
24	5	1985	2	0.88	30	5	1985	12	0.85	4	6	1985	9	0.84
24	5	1985	3	0.82	30	5	1985	2	0.9	5	6	1985	12	0.81
24	5	1985	4	0.98	30	5	1985	3	0.81	5	6	1985	2	0.89

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
5	6	1985	3	0.78	11	6	1985	2	0.84	17	6	1985	12	0.7
5	6	1985	4	0.93	11	6	1985	3	0.7	17	6	1985	2	0.82
5	6	1985	5	0.86	11	6	1985	4	0.85	17	6	1985	3	0.66
5	6	1985	7	0.84	11	6	1985	5	0.81	17	6	1985	4	0.8
5	6	1985	8	1.	11	6	1985	7	0.81	17	6	1985	5	0.63
5	6	1985	9	0.82	11	6	1985	8	0.94	17	6	1985	7	0.81
6	6	1985	12	0.8	11	6	1985	9	0.75	17	6	1985	8	0.93
6	6	1985	2	0.88	12	6	1985	12	0.73	17	6	1985	9	0.72
6	6	1985	3	0.76	12	6	1985	2	0.83	18	6	1985	12	0.7
6	6	1985	4	0.92	12	6	1985	3	0.69	18	6	1985	2	0.8
6	6	1985	5	0.85	12	6	1985	4	0.84	18	6	1985	3	0.65
6	6	1985	7	0.84	12	6	1985	5	0.8	18	6	1985	4	0.8
6	6	1985	8	0.99	12	6	1985	7	0.8	18	6	1985	5	0.68
6	6	1985	9	0.81	12	6	1985	8	0.94	18	6	1985	7	0.8
7	6	1985	12	0.78	12	6	1985	9	0.74	18	6	1985	8	0.92
7	6	1985	2	0.87	13	6	1985	12	0.73	18	6	1985	9	0.71
7	6	1985	3	0.75	13	6	1985	2	0.83	19	6	1985	12	0.69
7	6	1985	4	0.9	13	6	1985	3	0.69	19	6	1985	2	0.8
7	6	1985	5	0.84	13	6	1985	4	0.84	19	6	1985	3	0.65
7	6	1985	7	0.83	13	6	1985	5	0.8	19	6	1985	4	0.79
7	6	1985	8	0.98	13	6	1985	7	0.8	19	6	1985	5	0.82
7	6	1985	9	0.79	13	6	1985	8	0.94	19	6	1985	7	0.8
8	6	1985	12	0.96	13	6	1985	9	0.74	19	6	1985	8	0.93
8	6	1985	2	0.86	14	6	1985	12	0.72	19	6	1985	9	0.7
8	6	1985	3	0.75	14	6	1985	2	0.84	20	6	1985	12	0.68
8	6	1985	4	0.89	14	6	1985	3	0.68	20	6	1985	2	0.8
8	6	1985	5	0.84	14	6	1985	4	0.84	20	6	1985	3	0.64
8	6	1985	7	0.83	14	6	1985	5	0.79	20	6	1985	4	0.78
8	6	1985	8	0.97	14	6	1985	7	0.81	20	6	1985	5	0.81
8	6	1985	9	0.98	14	6	1985	8	0.94	20	6	1985	7	0.8
9	6	1985	12	0.75	14	6	1985	9	0.74	20	6	1985	8	0.9
9	6	1985	2	0.85	15	6	1985	12	0.71	20	6	1985	9	0.7
9	6	1985	3	0.74	15	6	1985	2	0.86	21	6	1985	12	0.67
9	6	1985	4	0.88	15	6	1985	3	0.67	21	6	1985	2	0.79
9	6	1985	5	0.84	15	6	1985	4	0.83	21	6	1985	3	0.68
9	6	1985	7	0.82	15	6	1985	5	0.7	21	6	1985	4	0.78
9	6	1985	8	0.96	15	6	1985	7	0.81	21	6	1985	5	0.74
9	6	1985	9	0.97	15	6	1985	8	0.95	21	6	1985	7	0.79
10	6	1985	12	0.74	15	6	1985	9	0.74	21	6	1985	8	0.9
10	6	1985	2	0.84	16	6	1985	12	0.71	21	6	1985	9	0.69
10	6	1985	3	0.73	16	6	1985	2	0.84	22	6	1985	12	0.66
10	6	1985	4	0.86	16	6	1985	3	0.68	22	6	1985	2	0.79
10	6	1985	5	0.84	16	6	1985	4	0.82	22	6	1985	3	0.68
10	6	1985	7	0.81	16	6	1985	5	0.69	22	6	1985	4	0.78
10	6	1985	8	0.95	16	6	1985	7	0.81	22	6	1985	5	0.73
10	6	1985	9	0.76	16	6	1985	8	0.95	22	6	1985	7	0.79
11	6	1985	12	0.74	16	6	1985	9	0.74	22	6	1985	8	0.9

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND#	DEPTH
22	6	1985	9	0.69
23	6	1985	12	0.65
23	6	1985	2	0.79
23	6	1985	3	0.67
23	6	1985	4	0.78
23	6	1985	5	0.72
23	6	1985	7	0.78
23	6	1985	8	0.9
23	6	1985	9	0.69
24	6	1985	12	0.71
24	6	1985	2	0.83
24	6	1985	3	0.7
24	6	1985	4	0.8
24	6	1985	5	0.71
24	6	1985	7	0.82
24	6	1985	8	0.94
24	6	1985	9	0.72
25	6	1985	12	0.7
25	6	1985	2	0.82
25	6	1985	3	0.68
25	6	1985	4	0.78
25	6	1985	5	0.69
25	6	1985	7	0.79
25	6	1985	8	0.92
25	6	1985	9	0.7
26	6	1985	12	0.69
26	6	1985	2	0.82
26	6	1985	3	0.68
26	6	1985	4	0.78
26	6	1985	5	0.69
26	6	1985	7	0.79
26	6	1985	8	0.92
26	6	1985	9	0.7
27	6	1985	12	0.69
27	6	1985	2	0.8
27	6	1985	3	0.67
27	6	1985	4	0.77
27	6	1985	5	0.68
27	6	1985	7	0.78
27	6	1985	8	0.92
27	6	1985	9	0.7
28	6	1985	12	0.68
28	6	1985	2	0.79
28	6	1985	3	0.72
28	6	1985	4	0.76
28	6	1985	5	0.75
28	6	1985	7	0.8
28	6	1985	8	0.91
28	6	1985	9	0.7

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH
1	8	1985	12	1.08
1	8	1985	2	0.91
1	8	1985	3	0.91
1	8	1985	4	0.9
1	8	1985	5	0.91
1	8	1985	7	0.91
1	8	1985	8	0.89
1	8	1985	9	0.9
2	8	1985	12	0.05
2	8	1985	2	0.9
2	8	1985	3	0.9
2	8	1985	4	0.89
2	8	1985	5	0.9
2	8	1985	7	0.9
2	8	1985	8	0.88
2	8	1985	9	0.89
3	8	1985	12	0.92
3	8	1985	2	0.88
3	8	1985	3	0.88
3	8	1985	4	0.88
3	8	1985	5	0.88
3	8	1985	7	0.9
3	8	1985	8	0.88
3	8	1985	9	0.89
4	8	1985	12	0.94
4	8	1985	2	0.93
4	8	1985	3	0.91
4	8	1985	4	0.99
4	8	1985	5	0.93
4	8	1985	7	0.93
4	8	1985	8	0.92
4	8	1985	9	0.91
5	8	1985	12	0.93
5	8	1985	2	0.92
5	8	1985	3	0.9
5	8	1985	4	0.98
5	8	1985	5	0.92
5	8	1985	7	0.93
5	8	1985	8	0.92
5	8	1985	9	0.9
6	8	1985	12	0.91
6	8	1985	2	0.92
6	8	1985	3	0.9
6	8	1985	4	0.98
6	8	1985	5	0.92
6	8	1985	7	0.94
6	8	1985	8	0.92
6	8	1985	9	0.9
7	8	1985	12	0.9
7	8	1985	2	0.92
7	8	1985	3	0.89
7	8	1985	4	0.96
7	8	1985	5	0.92
7	8	1985	7	0.94
7	8	1985	8	0.91
7	8	1985	9	0.95
8	8	1985	12	0.88
8	8	1985	2	0.9
8	8	1985	3	0.88
8	8	1985	4	0.95
8	8	1985	5	0.91
8	8	1985	7	0.94
8	8	1985	8	0.91
8	8	1985	9	0.89
9	8	1985	12	0.86
9	8	1985	2	0.9
9	8	1985	3	0.86
9	8	1985	4	0.94
9	8	1985	5	0.9
9	8	1985	7	0.93
9	8	1985	8	0.91
9	8	1985	9	0.88
10	8	1985	12	0.85
10	8	1985	2	0.88
10	8	1985	3	0.85
10	8	1985	4	0.93
10	8	1985	5	0.91
10	8	1985	7	0.93
10	8	1985	8	0.9
10	8	1985	9	0.89
11	8	1985	12	0.84
11	8	1985	2	0.89
11	8	1985	3	0.84
11	8	1985	4	0.92
11	8	1985	5	0.89
11	8	1985	7	0.94
11	8	1985	8	0.9
11	8	1985	9	0.88
12	8	1985	12	0.82
12	8	1985	2	0.87
12	8	1985	3	0.83
12	8	1985	4	0.91
12	8	1985	5	0.9
12	8	1985	7	0.92
12	8	1985	8	0.89
12	8	1985	9	0.86
13	8	1985	12	0.8
13	8	1985	2	0.87
13	8	1985	3	0.82
13	8	1985	4	0.9
13	8	1985	5	0.88
13	8	1985	7	0.92
13	8	1985	8	0.88
13	8	1985	9	0.85
14	8	1985	12	0.79
14	8	1985	2	0.86
14	8	1985	3	0.81
14	8	1985	4	0.89
14	8	1985	5	0.87
14	8	1985	7	0.91
14	8	1985	8	0.87
14	8	1985	9	0.84
15	8	1985	12	0.93
15	8	1985	2	0.9
15	8	1985	3	0.93
15	8	1985	4	0.9
15	8	1985	5	0.99
15	8	1985	7	0.93
15	8	1985	8	0.92
15	8	1985	9	1.
16	8	1985	12	0.92
16	8	1985	2	0.9
16	8	1985	3	0.91
16	8	1985	4	0.9
16	8	1985	5	0.98
16	8	1985	7	0.93
16	8	1985	8	0.92
16	8	1985	9	0.99
17	8	1985	12	0.9
17	8	1985	2	0.91
17	8	1985	3	0.9
17	8	1985	4	0.89
17	8	1985	5	0.96
17	8	1985	7	0.94
17	8	1985	8	0.93
17	8	1985	9	0.94
18	8	1985	12	0.89
18	8	1985	2	0.89
18	8	1985	3	0.89
18	8	1985	4	0.88

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
18	8	1985	5	0.95	24	8	1985	4	0.86	30	8	1985	3	0.86
18	8	1985	7	0.93	24	8	1985	5	0.94	30	8	1985	4	0.88
18	8	1985	8	0.92	24	8	1985	7	0.93	30	8	1985	5	0.98
18	8	1985	9	0.93	24	8	1985	8	0.93	30	8	1985	7	0.96
19	8	1985	12	0.89	24	8	1985	9	0.91	30	8	1985	8	0.97
19	8	1985	2	0.88	25	8	1985	12	0.84	30	8	1985	9	0.93
19	8	1985	3	0.88	25	8	1985	2	0.87	31	8	1985	12	0.85
19	8	1985	4	0.88	25	8	1985	3	0.84	31	8	1985	2	0.91
19	8	1985	5	0.95	25	8	1985	4	0.86	31	8	1985	3	0.86
19	8	1985	7	0.92	25	8	1985	5	0.93	31	8	1985	4	0.88
19	8	1985	8	0.92	25	8	1985	7	0.93	31	8	1985	5	0.97
19	8	1985	9	0.92	25	8	1985	8	0.92	31	8	1985	7	0.95
20	8	1985	12	0.88	25	8	1985	9	0.9	31	8	1985	8	0.96
20	8	1985	2	0.88	26	8	1985	12	0.83	31	8	1985	9	0.93
20	8	1985	3	0.88	26	8	1985	2	0.86	1	9	1985	12	0.88
20	8	1985	4	0.88	26	8	1985	3	0.83	1	9	1985	2	0.95
20	8	1985	5	0.94	26	8	1985	4	0.85	1	9	1985	3	0.87
20	8	1985	7	0.92	26	8	1985	5	0.92	1	9	1985	4	0.97
20	8	1985	8	0.92	26	8	1985	7	0.92	1	9	1985	5	0.97
20	8	1985	9	0.92	26	8	1985	8	0.92	1	9	1985	7	0.99
21	8	1985	12	0.87	26	8	1985	9	0.89	1	9	1985	8	0.99
21	8	1985	2	0.88	27	8	1985	12	0.82	1	9	1985	9	0.95
21	8	1985	3	0.88	27	8	1985	2	0.86	2	9	1985	12	0.88
21	8	1985	4	0.87	27	8	1985	3	0.82	2	9	1985	2	0.94
21	8	1985	5	0.94	27	8	1985	4	0.5	2	9	1985	3	0.86
21	8	1985	7	0.92	27	8	1985	5	0.91	2	9	1985	4	0.98
21	8	1985	8	0.92	27	8	1985	7	0.91	2	9	1985	5	0.98
21	8	1985	9	0.91	27	8	1985	8	0.92	2	9	1985	7	0.99
22	8	1985	12	0.88	27	8	1985	9	0.89	2	9	1985	8	0.99
22	8	1985	2	0.89	28	8	1985	12	0.86	2	9	1985	9	0.94
22	8	1985	3	0.87	28	8	1985	2	0.91	3	9	1985	12	0.87
22	8	1985	4	0.88	28	8	1985	3	0.86	3	9	1985	2	0.93
22	8	1985	5	0.95	28	8	1985	4	0.89	3	9	1985	3	0.86
22	8	1985	7	0.93	28	8	1985	5	0.97	3	9	1985	4	0.97
22	8	1985	8	0.94	28	8	1985	7	0.96	3	9	1985	5	0.97
22	8	1985	9	0.92	28	8	1985	8	0.96	3	9	1985	7	0.99
23	8	1985	12	0.88	28	8	1985	9	0.93	3	9	1985	8	0.99
23	8	1985	2	0.89	29	8	1985	12	0.86	3	9	1985	9	0.93
23	8	1985	3	0.86	29	8	1985	2	0.91	4	9	1985	12	0.88
23	8	1985	4	0.87	29	8	1985	3	0.85	4	9	1985	2	0.94
23	8	1985	5	0.95	29	8	1985	4	0.89	4	9	1985	3	0.87
23	8	1985	7	0.93	29	8	1985	5	0.97	4	9	1985	4	0.97
23	8	1985	8	0.93	29	8	1985	7	0.96	4	9	1985	5	0.97
23	8	1985	9	0.92	29	8	1985	8	0.96	4	9	1985	7	1.
24	8	1985	12	0.85	29	8	1985	9	0.92	4	9	1985	8	1.
24	8	1985	2	0.89	30	8	1985	12	0.86	4	9	1985	9	0.94
24	8	1985	3	0.85	30	8	1985	2	0.91	5	9	1985	12	0.88

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
5	9	1985	2	0.94	11	9	1985	12	0.86	16	9	1985	9	0.89
5	9	1985	3	0.87	11	9	1985	2	0.95	17	9	1985	12	0.98
5	9	1985	4	0.97	11	9	1985	3	0.85	17	9	1985	2	1.15
5	9	1985	5	0.97	11	9	1985	4	0.92	17	9	1985	3	0.97
5	9	1985	7	1.	11	9	1985	5	0.97	17	9	1985	4	1.02
5	9	1985	8	1.	11	9	1985	7	1.01	17	9	1985	5	1.1
5	9	1985	9	0.94	11	9	1985	8	1.02	17	9	1985	7	1.17
6	9	1985	12	0.87	11	9	1985	9	0.93	17	9	1985	8	1.18
6	9	1985	2	0.95	12	9	1985	12	0.86	17	9	1985	9	1.04
6	9	1985	3	0.86	12	9	1985	2	0.95	18	9	1985	12	0.98
6	9	1985	4	0.96	12	9	1985	3	0.85	18	9	1985	2	1.15
6	9	1985	5	0.96	12	9	1985	4	0.91	18	9	1985	3	0.97
6	9	1985	7	1.	12	9	1985	5	0.97	18	9	1985	4	1.
6	9	1985	8	1.01	12	9	1985	7	1.01	18	9	1985	5	1.11
6	9	1985	9	0.94	12	9	1985	8	1.02	18	9	1985	7	1.18
7	9	1985	12	0.88	12	9	1985	9	0.92	18	9	1985	8	1.18
7	9	1985	2	0.95	13	9	1985	12	0.86	18	9	1985	9	1.04
7	9	1985	3	0.86	13	9	1985	2	0.95	19	9	1985	12	1.04
7	9	1985	4	0.97	13	9	1985	3	0.84	19	9	1985	2	1.21
7	9	1985	5	0.97	13	9	1985	4	0.91	19	9	1985	3	1.02
7	9	1985	7	1.	13	9	1985	5	0.98	19	9	1985	4	1.02
7	9	1985	8	1.01	13	9	1985	7	1.01	19	9	1985	5	1.17
7	9	1985	9	0.94	13	9	1985	8	1.02	19	9	1985	7	1.24
8	9	1985	12	0.88	13	9	1985	9	0.91	19	9	1985	8	1.24
8	9	1985	2	0.96	14	9	1985	12	0.85	19	9	1985	9	1.09
8	9	1985	3	0.86	14	9	1985	2	0.98	20	9	1985	12	1.08
8	9	1985	4	0.97	14	9	1985	3	0.83	20	9	1985	2	1.25
8	9	1985	5	0.97	14	9	1985	4	0.91	20	9	1985	3	1.03
8	9	1985	7	1.	14	9	1985	5	0.97	20	9	1985	4	1.02
8	9	1985	8	1.01	14	9	1985	7	1.01	20	9	1985	5	1.21
8	9	1985	9	0.94	14	9	1985	8	1.02	20	9	1985	7	1.29
9	9	1985	12	0.88	14	9	1985	9	0.91	20	9	1985	8	1.24
9	9	1985	2	0.96	15	9	1985	12	0.84	20	9	1985	9	1.13
9	9	1985	3	0.86	15	9	1985	2	0.98	21	9	1985	12	1.07
9	9	1985	4	0.92	15	9	1985	3	0.83	21	9	1985	2	1.22
9	9	1985	5	0.97	15	9	1985	4	0.9	21	9	1985	3	1.01
9	9	1985	7	1.01	15	9	1985	5	0.95	21	9	1985	4	1.
9	9	1985	8	1.01	15	9	1985	7	1.	21	9	1985	5	1.19
9	9	1985	9	0.94	15	9	1985	8	1.01	21	9	1985	7	1.28
10	9	1985	12	0.87	15	9	1985	9	0.9	21	9	1985	8	1.2
10	9	1985	2	0.96	16	9	1985	12	0.83	21	9	1985	9	1.1
10	9	1985	3	0.86	16	9	1985	2	0.98	22	9	1985	12	1.06
10	9	1985	4	0.92	16	9	1985	3	0.82	22	9	1985	2	1.2
10	9	1985	5	0.97	16	9	1985	4	0.89	22	9	1985	3	1.
10	9	1985	7	1.02	16	9	1985	5	0.95	22	9	1985	4	0.99
10	9	1985	8	1.02	16	9	1985	7	1.	22	9	1985	5	1.18
10	9	1985	9	0.93	16	9	1985	8	1.01	22	9	1985	7	1.29

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
22	9	1985	8	1.19	28	9	1985	7	1.29	4	10	1985	5	1.13
22	9	1985	9	1.13	28	9	1985	8	1.2	4	10	1985	7	1.06
23	9	1985	12	1.07	28	9	1985	9	1.07	4	10	1985	8	1.05
23	9	1985	2	1.21	29	9	1985	12	1.02	4	10	1985	9	1.
23	9	1985	3	0.99	29	9	1985	2	1.17	5	10	1985	12	0.97
23	9	1985	4	1.	29	9	1985	3	0.95	5	10	1985	2	1.15
23	9	1985	5	1.19	29	9	1985	4	0.99	5	10	1985	3	0.9
23	9	1985	7	1.3	29	9	1985	5	1.17	5	10	1985	4	0.96
23	9	1985	8	1.21	29	9	1985	7	1.28	5	10	1985	5	1.12
23	9	1985	9	1.	29	9	1985	8	1.18	5	10	1985	7	1.05
24	9	1985	12	1.07	29	9	1985	9	1.06	5	10	1985	8	1.04
24	9	1985	2	1.22	30	9	1985	12	1.	5	10	1985	9	0.99
24	9	1985	3	1.	30	9	1985	2	1.18	6	10	1985	12	0.96
24	9	1985	4	1.	30	9	1985	3	0.94	6	10	1985	2	1.14
24	9	1985	5	1.2	30	9	1985	4	0.98	6	10	1985	3	0.89
24	9	1985	7	1.3	30	9	1985	5	1.16	6	10	1985	4	0.96
24	9	1985	8	1.22	30	9	1985	7	1.27	6	10	1985	5	1.11
24	9	1985	9	1.11	30	9	1985	8	1.18	6	10	1985	7	1.04
25	9	1985	12	1.06	30	9	1985	9	1.04	6	10	1985	8	1.04
25	9	1985	2	1.21	1	10	1985	12	0.99	6	10	1985	9	0.98
25	9	1985	3	1.	1	10	1985	2	1.17	7	10	1985	12	0.95
25	9	1985	4	1.	1	10	1985	3	0.93	7	10	1985	2	1.13
25	9	1985	5	1.2	1	10	1985	4	0.97	7	10	1985	3	0.88
25	9	1985	7	1.3	1	10	1985	5	1.14	7	10	1985	4	0.95
25	9	1985	8	1.21	1	10	1985	7	1.26	7	10	1985	5	1.1
25	9	1985	9	1.1	1	10	1985	8	1.18	7	10	1985	7	1.04
26	9	1985	12	1.05	1	10	1985	9	1.03	7	10	1985	8	1.04
26	9	1985	2	1.2	2	10	1985	12	0.99	7	10	1985	9	0.97
26	9	1985	3	0.98	2	10	1985	2	1.17	8	10	1985	12	0.94
26	9	1985	4	1.	2	10	1985	3	0.93	8	10	1985	2	1.13
26	9	1985	5	1.2	2	10	1985	4	0.97	8	10	1985	3	0.88
26	9	1985	7	1.29	2	10	1985	5	1.14	8	10	1985	4	0.95
26	9	1985	8	1.2	2	10	1985	7	1.07	8	10	1985	5	1.1
26	9	1985	9	1.09	2	10	1985	8	1.18	8	10	1985	7	1.03
27	9	1985	12	1.04	2	10	1985	9	1.02	8	10	1985	8	1.04
27	9	1985	2	1.19	3	10	1985	12	0.98	8	10	1985	9	0.96
27	9	1985	3	0.97	3	10	1985	2	1.17	9	10	1985	12	0.94
27	9	1985	4	0.99	3	10	1985	3	0.92	9	10	1985	2	1.12
27	9	1985	5	1.19	3	10	1985	4	0.97	9	10	1985	3	0.87
27	9	1985	7	1.29	3	10	1985	5	1.14	9	10	1985	4	0.94
27	9	1985	8	1.2	3	10	1985	7	1.07	9	10	1985	5	0.99
27	9	1985	9	1.08	3	10	1985	8	1.05	9	10	1985	7	1.02
28	9	1985	12	1.03	3	10	1985	9	1.01	9	10	1985	8	1.03
28	9	1985	2	1.19	4	10	1985	12	0.98	9	10	1985	9	0.96
28	9	1985	3	0.96	4	10	1985	2	1.15	10	10	1985	12	0.93
28	9	1985	4	0.99	4	10	1985	3	0.91	10	10	1985	2	1.12
28	9	1985	5	1.18	4	10	1985	4	0.97	10	10	1985	3	0.86

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
10	10	1985	4	0.94	16	10	1985	3	0.96	22	10	1985	2	1.17
10	10	1985	5	0.99	16	10	1985	4	0.98	22	10	1985	3	0.96
10	10	1985	7	1.02	16	10	1985	5	1.14	22	10	1985	4	0.99
10	10	1985	8	1.03	16	10	1985	7	1.11	22	10	1985	5	1.15
10	10	1985	9	0.95	16	10	1985	8	1.14	22	10	1985	7	1.15
11	10	1985	12	0.96	16	10	1985	9	0.96	22	10	1985	8	1.2
11	10	1985	2	1.15	17	10	1985	12	0.97	22	10	1985	9	0.95
11	10	1985	3	0.96	17	10	1985	2	1.14	23	10	1985	12	0.99
11	10	1985	4	0.96	17	10	1985	3	0.96	23	10	1985	2	1.17
11	10	1985	5	1.11	17	10	1985	4	0.98	23	10	1985	3	0.96
11	10	1985	7	1.06	17	10	1985	5	1.13	23	10	1985	4	0.99
11	10	1985	8	1.07	17	10	1985	7	1.1	23	10	1985	5	1.15
11	10	1985	9	0.96	17	10	1985	8	1.14	23	10	1985	7	1.15
12	10	1985	12	0.97	17	10	1985	9	0.95	23	10	1985	8	1.2
12	10	1985	2	1.16	18	10	1985	12	1.01	23	10	1985	9	0.95
12	10	1985	3	0.96	18	10	1985	2	1.18	24	10	1985	12	0.99
12	10	1985	4	0.97	18	10	1985	3	0.99	24	10	1985	2	1.17
12	10	1985	5	1.12	18	10	1985	4	1.01	24	10	1985	3	0.96
12	10	1985	7	1.07	18	10	1985	5	1.16	24	10	1985	4	0.99
12	10	1985	8	1.08	18	10	1985	7	1.14	24	10	1985	5	1.15
12	10	1985	9	0.96	18	10	1985	8	1.18	24	10	1985	7	1.16
13	10	1985	12	0.98	18	10	1985	9	0.98	24	10	1985	8	1.21
13	10	1985	2	1.17	19	10	1985	12	1.	24	10	1985	9	0.95
13	10	1985	3	0.97	19	10	1985	2	1.18	25	10	1985	12	0.98
13	10	1985	4	0.98	19	10	1985	3	0.98	25	10	1985	2	1.15
13	10	1985	5	1.13	19	10	1985	4	1.	25	10	1985	3	0.94
13	10	1985	7	1.09	19	10	1985	5	1.16	25	10	1985	4	0.98
13	10	1985	8	1.1	19	10	1985	7	1.14	25	10	1985	5	1.15
13	10	1985	9	0.97	19	10	1985	8	1.18	25	10	1985	7	1.15
14	10	1985	12	0.98	19	10	1985	9	0.97	25	10	1985	8	1.2
14	10	1985	2	1.17	20	10	1985	12	1.	25	10	1985	9	0.94
14	10	1985	3	0.97	20	10	1985	2	1.18	26	10	1985	12	0.98
14	10	1985	4	0.99	20	10	1985	3	0.97	26	10	1985	2	1.14
14	10	1985	5	1.14	20	10	1985	4	0.99	26	10	1985	3	0.93
14	10	1985	7	1.11	20	10	1985	5	1.16	26	10	1985	4	0.98
14	10	1985	8	1.12	20	10	1985	7	1.14	26	10	1985	5	1.14
14	10	1985	9	0.97	20	10	1985	8	1.19	26	10	1985	7	1.15
15	10	1985	12	0.99	20	10	1985	9	0.96	26	10	1985	8	1.2
15	10	1985	2	1.17	21	10	1985	12	1.	26	10	1985	9	0.94
15	10	1985	3	0.97	21	10	1985	2	1.18	27	10	1985	12	0.97
15	10	1985	4	0.98	21	10	1985	3	0.97	27	10	1985	2	1.14
15	10	1985	5	1.14	21	10	1985	4	0.99	27	10	1985	3	0.91
15	10	1985	7	1.11	21	10	1985	5	1.16	27	10	1985	4	0.97
15	10	1985	8	1.13	21	10	1985	7	1.16	27	10	1985	5	1.13
15	10	1985	9	0.97	21	10	1985	8	1.2	27	10	1985	7	1.14
16	10	1985	12	0.98	21	10	1985	9	0.96	27	10	1985	8	1.2
16	10	1985	2	1.15	22	10	1985	12	0.99	27	10	1985	9	0.92

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
28	10	1985	12	0.97	2	11	1985	9	0.9	8	11	1985	8	1.1
28	10	1985	2	1.14	3	11	1985	12	0.93	8	11	1985	9	0.84
28	10	1985	3	0.91	3	11	1985	2	1.12	9	11	1985	12	0.9
28	10	1985	4	0.97	3	11	1985	3	0.86	9	11	1985	2	1.06
28	10	1985	5	1.13	3	11	1985	4	0.95	9	11	1985	3	0.82
28	10	1985	7	1.14	3	11	1985	5	1.1	9	11	1985	4	0.92
28	10	1985	8	1.2	3	11	1985	7	1.11	9	11	1985	5	1.06
28	10	1985	9	0.9	3	11	1985	8	1.19	9	11	1985	7	1.07
29	10	1985	12	0.96	3	11	1985	9	0.88	9	11	1985	8	1.09
29	10	1985	2	1.14	4	11	1985	12	0.92	9	11	1985	9	0.84
29	10	1985	3	0.91	4	11	1985	2	1.11	10	11	1985	12	0.9
29	10	1985	4	0.97	4	11	1985	3	0.85	10	11	1985	2	1.05
29	10	1985	5	1.12	4	11	1985	4	0.94	10	11	1985	3	0.81
29	10	1985	7	1.14	4	11	1985	5	1.09	10	11	1985	4	0.91
29	10	1985	8	1.2	4	11	1985	7	1.1	10	11	1985	5	1.05
29	10	1985	9	0.9	4	11	1985	8	1.18	10	11	1985	7	1.07
30	10	1985	12	0.95	4	11	1985	9	0.86	10	11	1985	8	1.09
30	10	1985	2	1.14	5	11	1985	12	0.92	10	11	1985	9	0.83
30	10	1985	3	0.9	5	11	1985	2	1.1	11	11	1985	12	0.9
30	10	1985	4	0.96	5	11	1985	3	0.85	11	11	1985	2	1.04
30	10	1985	5	0.12	5	11	1985	4	0.94	11	11	1985	3	0.8
30	10	1985	7	1.13	5	11	1985	5	1.08	11	11	1985	4	0.91
30	10	1985	8	1.2	5	11	1985	7	1.1	11	11	1985	5	1.05
30	10	1985	9	0.9	5	11	1985	8	1.17	11	11	1985	7	1.07
31	10	1985	12	0.99	5	11	1985	9	0.85	11	11	1985	8	1.08
31	10	1985	2	1.12	6	11	1985	12	0.9	11	11	1985	9	0.82
31	10	1985	3	0.9	6	11	1985	2	1.09	12	11	1985	12	0.84
31	10	1985	4	0.96	6	11	1985	3	0.85	12	11	1985	2	1.03
31	10	1985	5	1.12	6	11	1985	4	0.93	12	11	1985	3	0.8
31	10	1985	7	1.14	6	11	1985	5	1.08	12	11	1985	4	0.91
31	10	1985	8	1.2	6	11	1985	7	1.09	12	11	1985	5	1.04
31	10	1985	9	0.91	6	11	1985	8	1.17	12	11	1985	7	1.07
1	11	1985	12	0.94	6	11	1985	9	0.86	12	11	1985	8	0.94
1	11	1985	2	1.13	7	11	1985	12	0.9	12	11	1985	9	0.82
1	11	1985	3	0.89	7	11	1985	2	1.09	13	11	1985	12	0.86
1	11	1985	4	0.96	7	11	1985	3	0.83	13	11	1985	2	0.96
1	11	1985	5	1.11	7	11	1985	4	0.93	13	11	1985	3	0.8
1	11	1985	7	1.12	7	11	1985	5	1.07	13	11	1985	4	0.9
1	11	1985	8	1.2	7	11	1985	7	1.08	13	11	1985	5	0.93
1	11	1985	9	0.9	7	11	1985	8	1.1	13	11	1985	7	1.06
2	11	1985	12	0.94	7	11	1985	9	0.85	13	11	1985	8	0.93
2	11	1985	2	1.12	8	11	1985	12	0.9	13	11	1985	9	0.81
2	11	1985	3	0.88	8	11	1985	2	1.08	14	11	1985	12	0.87
2	11	1985	4	0.96	8	11	1985	3	0.82	14	11	1985	2	0.96
2	11	1985	5	1.1	8	11	1985	4	0.92	14	11	1985	3	0.8
2	11	1985	7	1.12	8	11	1985	5	1.06	14	11	1985	4	0.9
2	11	1985	8	1.2	8	11	1985	7	1.08	14	11	1985	5	0.94

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
14	11	1985	7	1.07	20	11	1985	5	0.9	29	11	1985	4	0.84
14	11	1985	8	0.94	20	11	1985	7	0.96	29	11	1985	5	0.88
14	11	1985	9	0.82	20	11	1985	8	0.93	29	11	1985	7	0.94
15	11	1985	12	0.87	20	11	1985	9	0.79	29	11	1985	8	0.91
15	11	1985	2	0.96	21	11	1985	12	0.81	29	11	1985	9	0.97
15	11	1985	3	0.8	21	11	1985	2	0.93	30	11	1985	12	0.91
15	11	1985	4	0.92	21	11	1985	3	0.73	30	11	1985	2	0.89
15	11	1985	5	0.95	21	11	1985	4	0.87	30	11	1985	3	0.91
15	11	1985	7	1.08	21	11	1985	5	0.89	30	11	1985	4	0.84
15	11	1985	8	0.95	21	11	1985	7	0.95	30	11	1985	5	0.88
15	11	1985	9	0.85	21	11	1985	8	0.93	30	11	1985	7	0.94
16	11	1985	12	0.86	21	11	1985	9	0.79	30	11	1985	8	0.91
16	11	1985	2	0.96	25	11	1985	12	0.79	30	11	1985	9	0.95
16	11	1985	3	0.79	25	11	1985	2	0.9	1	12	1985	12	0.91
16	11	1985	4	0.92	25	11	1985	3	0.7	1	12	1985	2	0.89
16	11	1985	5	0.94	25	11	1985	4	0.85	1	12	1985	3	0.89
16	11	1985	7	1.07	25	11	1985	5	0.88	1	12	1985	4	0.84
16	11	1985	8	0.95	25	11	1985	7	0.94	1	12	1985	5	0.87
16	11	1985	9	0.84	25	11	1985	8	0.9	1	12	1985	7	0.93
17	11	1985	12	0.86	25	11	1985	9	0.76	1	12	1985	8	0.91
17	11	1985	2	0.95	26	11	1985	12	0.78	1	12	1985	9	0.93
17	11	1985	3	0.78	26	11	1985	2	0.9	2	12	1985	12	0.9
17	11	1985	4	0.91	26	11	1985	3	0.95	2	12	1985	2	0.88
17	11	1985	5	0.94	26	11	1985	4	0.84	2	12	1985	3	0.88
17	11	1985	7	1.06	26	11	1985	5	0.87	2	12	1985	4	0.84
17	11	1985	8	0.94	26	11	1985	7	0.94	2	12	1985	5	0.86
17	11	1985	9	0.82	26	11	1985	8	0.9	2	12	1985	7	0.92
18	11	1985	12	0.85	26	11	1985	9	0.75	2	12	1985	8	0.9
18	11	1985	2	0.95	27	11	1985	12	0.92	2	12	1985	9	0.92
18	11	1985	3	0.77	27	11	1985	2	0.89	3	12	1985	12	0.88
18	11	1985	4	0.9	27	11	1985	3	0.94	3	12	1985	2	0.88
18	11	1985	5	0.93	27	11	1985	4	0.84	3	12	1985	3	0.88
18	11	1985	7	1.05	27	11	1985	5	0.87	3	12	1985	4	0.84
18	11	1985	8	0.94	27	11	1985	7	0.93	3	12	1985	5	0.86
18	11	1985	9	0.81	27	11	1985	8	0.9	3	12	1985	7	0.92
19	11	1985	12	0.84	27	11	1985	9	0.87	3	12	1985	8	0.9
19	11	1985	2	0.94	28	11	1985	12	0.92	3	12	1985	9	0.92
19	11	1985	3	0.76	28	11	1985	2	0.89	4	12	1985	12	0.88
19	11	1985	4	0.89	28	11	1985	3	0.92	4	12	1985	2	0.87
19	11	1985	5	0.92	28	11	1985	4	0.83	4	12	1985	3	0.86
19	11	1985	7	1.05	28	11	1985	5	0.86	4	12	1985	4	0.83
19	11	1985	8	0.94	28	11	1985	7	0.93	4	12	1985	5	0.85
19	11	1985	9	0.8	28	11	1985	8	0.9	4	12	1985	7	0.92
20	11	1985	12	0.82	28	11	1985	9	0.97	4	12	1985	8	0.9
20	11	1985	2	0.94	29	11	1985	12	0.92	4	12	1985	9	0.91
20	11	1985	3	0.74	29	11	1985	2	0.9	5	12	1985	12	0.87
20	11	1985	4	0.88	29	11	1985	3	0.92	5	12	1985	2	0.86

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH	DAY	MONTH	YEAR	POND#	DEPTH
5	12	1985	3	0.85	11	12	1985	2	0.82
5	12	1985	4	0.82	11	12	1985	3	0.8
5	12	1985	5	0.85	11	12	1985	4	0.82
5	12	1985	7	0.91	11	12	1985	5	0.88
5	12	1985	8	0.89	11	12	1985	7	0.88
5	12	1985	9	0.89	11	12	1985	8	0.88
6	12	1985	12	0.87	11	12	1985	9	0.83
6	12	1985	2	0.86	12	12	1985	12	0.82
6	12	1985	3	0.84	12	12	1985	2	0.82
6	12	1985	4	0.81	12	12	1985	3	0.94
6	12	1985	5	0.84	12	12	1985	4	0.86
6	12	1985	7	0.91	12	12	1985	5	0.89
6	12	1985	8	0.89	12	12	1985	7	0.88
6	12	1985	9	0.88	12	12	1985	8	0.88
7	12	1985	12	0.86	12	12	1985	9	0.83
7	12	1985	2	0.85	13	12	1985	12	0.81
7	12	1985	3	0.83	13	12	1985	2	0.81
7	12	1985	4	0.81	13	12	1985	3	0.93
7	12	1985	5	0.84	13	12	1985	4	0.88
7	12	1985	7	0.91	13	12	1985	5	0.89
7	12	1985	8	0.89	13	12	1985	7	0.88
7	12	1985	9	0.87	13	12	1985	8	0.88
8	12	1985	12	0.85	13	12	1985	9	0.81
8	12	1985	2	0.85	14	12	1985	12	0.8
8	12	1985	3	0.81	14	12	1985	2	0.81
8	12	1985	4	0.81	14	12	1985	3	0.91
8	12	1985	5	0.83	14	12	1985	4	0.87
8	12	1985	7	0.9	14	12	1985	5	0.88
8	12	1985	8	0.88	14	12	1985	7	0.87
8	12	1985	9	0.86	14	12	1985	8	0.87
9	12	1985	12	0.84	14	12	1985	9	0.81
9	12	1985	2	0.85	15	12	1985	12	0.79
9	12	1985	3	0.8	15	12	1985	2	0.81
9	12	1985	4	0.8	15	12	1985	3	0.89
9	12	1985	5	0.82	15	12	1985	4	0.87
9	12	1985	7	0.9	15	12	1985	5	0.87
9	12	1985	8	0.88	15	12	1985	7	0.87
9	12	1985	9	0.85	15	12	1985	8	0.86
10	12	1985	12	0.83	15	12	1985	9	0.79
10	12	1985	2	0.84	16	12	1985	12	0.78
10	12	1985	3	0.8	16	12	1985	2	0.8
10	12	1985	4	0.79	16	12	1985	3	0.87
10	12	1985	5	0.81	16	12	1985	4	0.87
10	12	1985	7	0.9	16	12	1985	5	0.86
10	12	1985	8	0.87	16	12	1985	7	0.86
10	12	1985	9	0.84	16	12	1985	8	0.86
11	12	1985	12	0.83	16	12	1985	9	0.78

Table 2. Daily Pond Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND#	DEPTH
17	12	1985	12	0.77
17	12	1985	2	0.8
17	12	1985	3	0.86
17	12	1985	4	0.85
17	12	1985	5	0.84
17	12	1985	7	0.86
17	12	1985	8	0.86
17	12	1985	9	0.78
18	12	1985	12	0.77
18	12	1985	2	0.8
18	12	1985	3	0.85
18	12	1985	4	0.85
18	12	1985	5	0.84
18	12	1985	7	0.86
18	12	1985	8	0.86
18	12	1985	9	0.77
19	12	1985	12	0.76
19	12	1985	2	0.8
19	12	1985	3	0.84
19	12	1985	4	0.84
19	12	1985	5	0.84
19	12	1985	7	0.85
19	12	1985	8	0.86
19	12	1985	9	0.76
20	12	1985	12	0.76
20	12	1985	2	0.79
20	12	1985	3	0.84
20	12	1985	4	0.84
20	12	1985	5	0.84
20	12	1985	7	0.85
20	12	1985	8	0.85
20	12	1985	9	0.76
21	12	1985	12	0.76
21	12	1985	2	0.79
21	12	1985	3	0.83
21	12	1985	4	0.83
21	12	1985	5	0.82
21	12	1985	7	0.84
21	12	1985	8	0.85
21	12	1985	9	0.76
22	12	1985	12	0.76
22	12	1985	2	0.78
22	12	1985	3	0.82
22	12	1985	4	0.82
22	12	1985	5	0.8
22	12	1985	7	0.84
22	12	1985	8	0.84
22	12	1985	9	0.76
23	12	1985	2	0.78
23	12	1985	3	0.81
23	12	1985	4	0.81
23	12	1985	5	0.79
23	12	1985	7	0.84
23	12	1985	8	0.84
23	12	1985	9	0.76

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A
5	2	1985		12	600	5.9	5.9	5.9	26.5	26.5	26.5					112.	492.	8.3		0.03	0.			0.71	0.59	39.	39.	55.
5	2	1985		2	600	3.9	3.8	3.8	26.5	26.5	26.5					128.	520.	7.3		0.03	0.			0.81	0.73	30.	30.	18.9
5	2	1985		3	600	2.9	2.8	2.8	26.5	26.5	26.5					128.	492.	7.4		0.04	0.01			0.11	0.02	34.	34.	15.
5	2	1985		4	600	2.6	2.5	2.5	26.	26.	26.	30.	30.	25.	25.	128.	492.	8.2		0.03	0.			0.7	0.69	33.	33.	31.3
5	2	1985		5	600	3.1	3.	2.9	26.5	26.5	26.5					144.	492.	7.6		0.05	0.01			0.09	0.03	37.	37.	11.
5	2	1985		7	600	4.1	4.	4.	25.5	25.5	25.5					120.	468.	7.6		0.04	0.01			0.09	0.05	38.	38.	4.
5	2	1985		8	600	3.3	3.2	3.2	26.5	26.5	26.5	31.	31.	26.5	25.5	128.	520.	8.		0.04	0.			0.7	0.7	27.	27.	22.
5	2	1985		9	600	3.9	3.8	3.8	26.5	26.5	26.5					116.	539.	7.5		0.05	0.01			0.12	0.04	38.	38.	15.
12	2	1985		12	600	3.5	3.3	3.	27.	27.	27.					156.	512.	8.2		0.43	0.			1.05	0.98	36.	36.	21.
12	2	1985		2	600	4.5	4.3	4.	27.	27.	27.					124.	552.	7.9		0.35	0.			1.21	1.16	34.	34.	38.
12	2	1985		3	600	4.2	4.	3.8	27.	27.	27.					132.	520.	8.		0.09	0.			0.18	0.02	34.	34.	16.
12	2	1985		4	600	4.2	4.	3.8	27.	27.	27.	30.	30.	24.	24.	120.	480.	8.3		0.44	0.01			0.81	0.76	30.	30.	54.
12	2	1985		5	600	4.2	4.1	3.3	27.	27.	27.					136.	520.	8.			0.			0.15	0.05	38.	38.	18.
12	2	1985		7	600	4.3	4.	4.	26.9	26.9	26.5					136.	512.	8.			0.			0.21	0.04	30.	30.	25.
12	2	1985		8	600	4.5	4.3	4.1	27.	27.	27.	31.	31.	26.	25.5	128.	480.	8.6		0.15	0.			1.16	1.01	27.	27.	65.
12	2	1985		9	600	4.4	4.2	4.	27.	27.	27.					140.	500.	8.2		0.02	0.			0.17	0.05	37.	37.	21.
19	2	1985		12	600	4.6	4.1	3.	28.	28.	28.					172.	484.	8.3		0.35	0.			0.73	0.57	22.	22.	14.
19	2	1985		2	600	4.8	3.8	3.2	27.5	27.5	27.5					116.	560.	8.2		0.43	0.			0.96	0.5	19.	19.	14.
19	2	1985		3	600	5.4	5.1	4.5	27.	27.	27.	34.	31.	27.	28.	164.	488.	8.1		0.08	0.01			0.15	0.02	30.	30.	15.
19	2	1985		4	600	4.3	4.	3.1	27.5	27.5	27.5	33.	30.	24.	24.	156.	480.	8.5		0.33	0.			0.59	0.53	22.	22.	28.
19	2	1985		5	600	5.2	4.9	4.6	27.8	27.8	27.8					188.	548.	8.		0.06	0.02			0.07	0.02	36.	36.	7.
19	2	1985		7	600	5.2	4.6	4.	27.5	27.5	27.					128.	568.	8.1		0.02	0.			0.18	0.01	22.	22.	5.
19	2	1985		8	600	4.9	4.1	3.1	28.	28.	28.	33.	31.	27.	27.	152.	520.	8.7		0.2	0.			0.83	0.51	20.	20.	42.
19	2	1985		9	600	5.	4.8	4.5	28.	28.	28.					168.	516.	8.1		0.01	0.01			0.08	0.03	29.	29.	19.
25	2	1985		12	600	4.9	4.8	4.	29.5	29.5	28.5					120.	460.	7.7		0.21	0.			0.21	0.15	40.	40.	12.
25	2	1985		2	600	7.8	7.3	6.2	29.5	29.	28.5					128.	564.	7.6		0.13	0.			0.23	0.14	46.	46.	6.
25	2	1985		3	600	5.7	5.7	5.7	29.5	29.1	28.	33.5	32.	28.	29.	140.	470.	7.5		0.04	0.01			0.	0.	55.	55.	2.
25	2	1985		4	600	7.3	6.7	6.5	29.5	28.	28.	33.	31.	27.5	24.	136.	496.	8.6		0.08	0.			0.17	0.11	39.	39.	36.
25	2	1985		5	600	6.	5.8	5.7	29.3	29.3	28.					140.	568.	7.7		0.01	0.			0.	0.	62.	62.	7.
25	2	1985		7	600	6.8	6.3	6.1	29.	29.	28.					140.	460.	7.8		0.	0.			0.01	0.	39.	39.	18.
25	2	1985		8	600	8.3	7.8	6.6	29.5	29.5	28.	32.	31.	27.	27.	168.	508.	8.5		0.06	0.			0.16	0.1	32.	32.	55.
25	2	1985		9	600	5.6	5.6	5.5	30.	30.	29.5					128.	460.	7.7		0.06	0.			0.01	0.01	62.	62.	24.
5	3	1985		12	600	5.4	5.1	5.1	25.7	25.7	25.7					140.	492.	8.3		0.27	0.			0.11	0.4	34.	34.	54.
5	3	1985		2	600	4.9	4.6	4.5	24.	24.	24.					128.	552.	8.		0.45	0.			0.22	0.32	24.	24.	53.
5	3	1985		3	600	4.8	4.7	4.5	26.	26.	26.	34.	32.	26.5	26.5	116.	444.	7.4		0.11	0.01			0.01	0.04	42.	42.	46.
5	3	1985		4	600	4.8	4.5	4.3	24.	24.	24.	33.	31.	26.	24.5	136.	504.	8.6		0.25	0.			0.12	0.26	20.	20.	87.
5	3	1985		5	600	5.8	5.8	5.7	24.	24.	24.					140.	520.	8.		0.05	0.02			0.03	0.01	37.	37.	55.
5	3	1985		7	600	6.4	6.4	6.3	25.9	25.9	25.9					124.	548.	8.4		0.03	0.			0.03	0.03	36.	36.	96.
5	3	1985		8	600	4.5	4.	3.7	25.9	25.8	25.8	32.		28.		136.	512.	8.7		0.15	0.			0.14	0.32	16.	16.	127.
5	3	1985		9	600	6.5	6.3	6.2	25.2	25.2	25.2					124.	488.	8.4		0.02	0.			0.04	0.01	43.	43.	99.
12	3	1985		12	600	7.2	6.	4.7	29.	29.	29.					100.	484.	8.8		0.03	0.			0.23	0.13	17.	17.	7.
12	3	1985		2	600	5.	4.7	3.6	29.	29.	29.					132.	608.	8.1		0.32	0.			0.27	0.22	21.	21.	27.
12	3	1985		3	600	5.1	5.	2.6	29.1	29.1	29.1	35.	34.	28.	27.	120.	432.	7.4		0.01	0.			0.06	0.03	40.	40.	14.
12	3	1985		4	600	5.1	3.	2.9	29.2	29.2	29.	31.	32.	27.	26.	136.	532.	8.2		0.21	0.			0.29	0.19	18.	18.	113.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A
12	3	1985		5	600	4.9	4.8	4.8	29.5	29.5	29.5					152.	576.	7.9			0.			0.07	0.03	45.	45.	24.
12	3	1985		7	600	4.3	4.1	3.7	29.1	29.1	29.1					144.	588.	8.		0.03	0.			0.04	0.02	22.	22.	17.
12	3	1985		8	600	6.3	5.6	3.7	29.	29.	29.	33.	32.	26.	26.	128.	556.	8.4		0.04	0.			0.29	0.15	15.	15.	12.
12	3	1985		9	600	4.7	4.4	3.5	29.	29.	29.					124.	520.	8.		0.01	0.			0.04	0.04	28.	28.	9.
19	3	1985		12	600	10.2	7.5	7.4	27.	27.	27.					120.	548.	8.9		0.08	0.			0.36	0.13	9.	9.	29.
19	3	1985		2	600	7.4	6.5	5.7	27.	27.	27.2					160.	668.	8.1		0.25	0.01			0.35	0.25	27.	27.	53.
19	3	1985		3	600	8.1	8.	8.	27.	27.	27.	33.	32.	28.	28.	128.	520.	8.2		0.03	0.			0.06	0.05			35.
19	3	1985		4	600	6.2	6.	5.4	27.2	27.	27.	33.	32.	28.	29.	144.	628.	8.4		0.24	0.01			0.37	0.21	20.	20.	13.
19	3	1985		5	600	7.2	7.1	7.	27.	27.	27.					172.	636.	8.		0.08	0.02			0.08	0.06	41.	41.	40.
19	3	1985		7	600	8.2	8.1	8.	27.	27.	27.					168.	660.	8.2			0.03			0.05	0.02	46.	46.	13.
19	3	1985		8	600	7.5	6.	4.	27.	27.2	27.2	33.5	32.5	27.	26.	136.	600.	8.6		0.09	0.			0.32	0.2	18.	18.	13.
19	3	1985		9	600	7.5	7.4	7.3	27.	27.	27.					144.	558.	8.3		0.02	0.			0.09	0.04			20.
26	3	1985		12	600	5.5	5.2	4.5	28.5	28.5	28.5					136.	412.	8.5		0.13	0.01			0.16	0.18	16.	16.	23.
26	3	1985		2	600	6.3	6.	4.8	28.5	28.5	28.5					180.	568.	8.6		0.16	0.			0.15	0.28	27.	27.	41.
26	3	1985		3	600	5.8	5.4	5.3	29.	29.	29.	34.	33.	24.	25.	160.	440.	8.1		0.03	0.04			0.01	0.03	35.	35.	35.
26	3	1985		4	600	6.	5.8	5.3	28.5	28.5	28.5	34.	32.	26.	27.	132.	560.	8.7		0.07	0.			0.08	0.1	30.	30.	19.
26	3	1985		5	600	4.3	4.2	4.1	28.5	28.5	28.5					120.	552.	7.9		0.04	0.02			0.07	0.06	40.	40.	16.
26	3	1985		7	600	5.6	5.5	3.3	28.5	28.5	28.5					144.	544.	8.1		0.04	0.06			0.02	0.02	47.	47.	8.
26	3	1985		8	600	4.5	4.3	3.	28.7	28.7	28.7	34.	32.	26.	24.	132.	504.	8.6		0.07	0.01			0.18	0.14	15.	15.	15.
26	3	1985		9	600	6.	5.7	5.6	29.	29.	29.					140.	428.	8.2		0.02	0.04			0.02	0.03	42.	42.	
2	4	1985		12	600	9.3	8.2	7.7	29.5	29.5	29.					148.	348.	9.4		0.62	0.01			0.19	0.08	12.	12.	33.
2	4	1985		2	600	6.9	6.3	5.	29.	29.	28.8					104.	496.	8.8		0.51	0.01			0.09	0.04	18.	18.	23.
2	4	1985		3	600	6.5	6.3	6.	28.5	28.5	28.		32.5	27.	26.5	112.	436.	8.7		0.03	0.			0.06	0.01	27.	27.	16.
2	4	1985		4	600	8.5	8.	7.	28.8	28.8	28.5	33.	32.5	27.	26.5	152.	432.	9.1		0.39	0.01			0.1	0.04	15.	15.	47.
2	4	1985		5	600	6.	5.8	5.6	29.	29.	28.8					136.	524.	8.3		0.01	0.01			0.05	0.01	38.	38.	53.
2	4	1985		7	600	5.8	5.5	5.	29.	29.	28.8					120.	508.	8.5		0.03	0.04			0.03	0.01	40.	40.	27.
2	4	1985		8	600	9.6	8.5	7.5	28.9	28.5	28.7	33.	32.5	27.	26.5	124.	524.	9.3		0.4	0.01			0.11	0.06	16.	16.	40.
2	4	1985		9	600	6.5	6.4	6.3	28.9	28.9	28.6					148.	504.	8.6		0.05	0.			0.06	0.03	43.	43.	13.
10	4	1985		12	600	9.3	8.2	7.7	29.5	29.5	29.					148.	348.	9.4		0.03	0.			0.07	0.04	12.	12.	80.
10	4	1985		2	600	6.9	6.3	5.	29.	29.	28.8					104.	496.	8.8		0.56	0.01			0.17	0.07	13.	13.	75.
10	4	1985		3	600	6.5	6.3	6.	28.5	28.5	28.		35.5	27.	32.5	112.	436.	8.7		0.01	0.			0.06	0.04	25.	25.	45.
10	4	1985		4	600	8.5	8.	7.	28.8	28.7	28.5	33.	32.5	27.	26.5	152.	432.	9.1		0.06	0.02			0.13	0.05	13.	13.	168.
10	4	1985		5	600	6.	5.8	5.6	29.	29.	28.8					136.	524.	8.3		0.06	0.			0.05	0.03	43.	43.	27.
10	4	1985		7	600	5.8	5.5	5.	29.	29.	28.8					120.	508.	8.5		0.01	0.			0.04	0.01	40.	40.	13.
10	4	1985		8	600	9.6	8.5	7.8	29.9	29.9	28.8	33.	32.5	27.	26.5	124.	524.	9.3		0.08	0.			0.14	0.05	13.	13.	45.
10	4	1985		9	600	6.5	6.4	6.3	28.9	28.9	28.6					148.	508.	8.6		0.04	0.			0.05	0.02	45.	45.	21.
17	4	1985		12	600	4.6	4.6	4.6	27.	27.	27.					132.	340.	8.8		0.31	0.			0.6	0.74	18.	18.	164.
17	4	1985		2	600	2.5	2.5	2.5	26.	26.	26.					136.	516.	7.8		0.57	0.			0.5	1.05	41.	41.	57.
17	4	1985		3	600	5.8	5.6	5.4	27.	27.	27.	36.	36.	24.	29.	148.	352.	8.5		0.01	0.			0.39	0.13	36.	36.	37.
17	4	1985		4	600	2.	2.	2.1	28.	28.	28.	32.	33.	28.	27.	120.	448.	8.4		0.06	0.			0.55	1.01	35.	35.	116.
17	4	1985		5	600	5.3	5.2	5.2	27.	27.	27.					164.	516.	8.4		0.02	0.01			0.34	0.1	32.	32.	84.
17	4	1985		7	600	6.5	6.4	6.2	28.	28.	28.					132.	512.	8.7		0.01	0.			0.28	0.02	32.	32.	88.
17	4	1985		8	600	2.4	2.4	2.4	27.	27.	27.	33.	33.	29.	28.	132.	412.	8.8		0.08	0.			0.44	0.9	24.	24.	103.
17	4	1985		9	600	6.9	6.8	6.7	27.5	27.5	27.5					112.	296.	8.6		0.02	0.			0.34	0.01	28.	28.	109.
24	4	1985		12	600	4.5	4.3	3.7	29.8	29.8	29.8					124.	336.	8.4		0.21	0.01			2.02	1.08	20.	20.	27.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A
24	4	1985		2	600	7.	6.	5.2	29.5	29.5	29.5	34.5	34.	27.5	27.	112.	476.	8.6		0.21	0.02			1.49	0.96	24.	24.	100.
24	4	1985		3	600	8.1	7.9	7.7	29.8	29.8	29.8					136.	360.	8.5		0.01	0.			0.43	0.21	30.	30.	27.
24	4	1985		4	600	7.7	7.4	6.	29.5	29.5	29.5	34.	33.5	27.	26.5	128.	420.	8.6		0.13	0.			1.15	1.32	27.	27.	89.
24	4	1985		5	600	5.6	5.4	5.	29.5	29.5	29.8					148.	448.	8.1		0.01	0.			1.5	0.12	39.	39.	64.
24	4	1985		7	600	7.9	7.8	7.6	29.5	29.5	29.5					112.	412.	8.8			0.01			0.3	0.11	24.	24.	41.
24	4	1985		8	600	8.	7.5	6.5	29.5	29.5	29.5	34.	33.5	27.	26.5	116.	412.	8.7		0.11	0.02			1.15	0.85	20.	20.	31.
24	4	1985		9	600	4.	4.	4.	29.8	29.8	29.8					80.	348.	8.5		0.05	0.01			0.29	0.11	41.	41.	17.
30	4	1985		12	600	5.3	5.4	5.6	28.	28.	28.					120.	292.	8.1		0.32	0.			0.3	0.22	28.	28.	76.
30	4	1985		2	600	5.2	5.2	5.4	28.	28.	28.	33.7	32.	27.	27.	120.	444.	8.6		0.05	0.01			0.19	0.09	35.	35.	76.
30	4	1985		3	600	5.3	5.4	5.5	28.	28.	28.					132.	268.	8.2			0.			0.05	0.04	48.	48.	34.
30	4	1985		4	600	5.4	5.4	5.5	28.	28.	28.	33.	32.	27.	27.	124.	408.	8.4		0.04	0.			0.22	0.14	41.	41.	85.
30	4	1985		5	600	6.2	6.3	6.4	27.8	27.8	27.8	32.	32.	27.	27.	148.	424.	8.1			0.			0.08	0.07	39.	39.	55.
30	4	1985		7	600	4.4	4.5	4.7	27.	27.	27.					92.	412.	7.8			0.			0.17	0.02	33.	33.	48.
30	4	1985		8	600	3.6	3.6	3.7	27.5	27.5	27.5					128.	412.	8.1		0.22	0.			0.16	0.18	33.	33.	123.
30	4	1985		9	600	5.2	5.3	5.4	28.	28.	28.					96.	272.	7.9			0.			0.09	0.01	39.	39.	31.
7	5	1985		12	600	4.5	4.5	4.5	30.5	30.5	30.5					96.	336.	8.4		0.22	0.			0.78	0.73	17.	17.	59.
7	5	1985		2	600	3.5	3.6	3.8	30.3	30.3	30.3	34.5	34.5	28.	28.	132.	424.	8.2		0.43	0.			0.74	0.7	20.	20.	51.
7	5	1985		3	600	9.6	9.7	9.5	30.9	30.9	30.9					100.	240.	8.7		0.08	0.			0.59	0.01	28.	28.	120.
7	5	1985		4	600	3.7	3.7	3.7	30.	30.	30.	34.5	34.	28.	27.	148.	452.	8.4		0.35	0.			0.82	0.67	30.	30.	53.
7	5	1985		5	600	5.3	5.4	5.6	30.1	30.1	30.1					152.	420.	8.1		0.06	0.			0.15	0.15	30.	30.	44.
7	5	1985		7	600	4.6	4.6	4.7	30.	30.	30.					80.	392.	8.1		0.09	0.			0.06	0.02	23.	23.	84.
7	5	1985		8	600	6.7	6.7	6.7	29.	29.	29.	34.5	34.5	28.5	28.5	152.	420.	8.7		0.4	0.			0.46	0.28	15.	15.	182.
7	5	1985		9	600	5.	5.	5.	30.9	30.9	30.9					128.	332.	8.1		0.08	0.			0.05	0.03	32.	32.	44.
14	5	1985		12	600	8.4	4.8	3.5	28.	27.5	27.					128.	292.	8.7		0.13	0.			1.01	1.	27.	27.	160.
14	5	1985		2	600	7.3	4.7	3.7	28.	27.5	27.	36.	33.	24.	29.	120.	444.	8.8		0.37	0.01			0.94	0.69	32.	32.	294.
14	5	1985		3	600	7.1	5.4	4.4	27.5	27.	27.					52.	208.	8.9		0.07	0.			0.07	0.01	24.	24.	422.
14	5	1985		4	600	5.6	5.1	3.6	28.	28.	27.5	33.	33.	28.	28.	136.	412.	8.7		0.4	0.			0.83	0.81	32.	32.	8.
14	5	1985		5	600	8.8	6.	4.9	27.5	27.5	27.					144.	424.	8.9		0.06	0.			0.16	0.14	34.	34.	132.
14	5	1985		7	600	8.2	4.6	3.8	27.5	27.	27.					88.	444.	8.8		0.1	0.			0.13	0.04	23.	23.	224.
14	5	1985		8	600	6.8	4.	2.5	27.5	27.	27.	33.	34.	29.	29.	100.	412.	8.7		0.23	0.			0.69	0.66	23.	23.	256.
14	5	1985		9	600	6.2	5.6	5.	27.5	27.5	27.					112.	316.	8.4		0.09	0.			0.07	0.05	35.	35.	51.
21	5	1985		12	600	3.3	3.5	3.6	28.5	28.5	28.5					112.	264.	8.6		0.06	0.			1.	1.04	11.	11.	140.
21	5	1985		2	600	3.5	3.6	3.7	28.5	28.5	28.5	35.	32.5	27.	28.	108.	420.	8.5		0.21	0.			0.83	0.75	17.	17.	52.
21	5	1985		3	600	3.6	3.6	3.8	28.5	28.5	28.5					92.	260.	8.7		0.05	0.			0.09	0.03	39.	39.	85.
21	5	1985		4	600	3.5	3.6	4.	28.8	28.8	28.8	34.	32.5	28.5	28.	126.	416.	8.5		0.11	0.			0.83	0.59	18.	18.	99.
21	5	1985		5	600	4.4	4.5	4.7	28.5	28.5	28.5					100.	360.	8.3		0.32	0.01			0.22	0.07	17.	17.	186.
21	5	1985		7	600	4.	4.1	4.3	28.	28.	28.					80.	400.	8.4		0.06	0.			0.17	0.01	18.	18.	256.
21	5	1985		8	600	2.	2.1	2.2	28.5	28.5	28.5	34.	33.	29.	28.	120.	388.	8.		0.53	0.			1.	1.09	17.	17.	128.
21	5	1985		9	600	5.	5.1	5.3	28.5	28.5	28.5					108.	300.	8.3		0.1	0.			0.07	0.02	29.	29.	75.
28	5	1985		12	600	2.4	2.5	2.7	28.	28.	28.					112.	272.	8.9		0.05				1.05	0.8	9.	9.	276.
28	5	1985		2	600	4.5	4.5	4.6	28.	28.	28.	35.	33.5	27.	28.	106.	440.	8.5		0.17	0.02			0.83	0.61	15.	15.	102.
28	5	1985		3	600	5.4	5.5	5.5	28.	28.	28.					100.	272.	8.8		0.02			0.	0.14	0.02	20.	20.	123.
28	5	1985		4	600	4.	4.1	4.2	28.	28.	28.	36.	34.	29.	27.	128.	364.	8.8		0.12	0.04			1.	0.74	12.	12.	190.
28	5	1985		5	600	4.6	4.6	4.7	28.	28.	28.					100.	392.	8.6		0.05			0.	0.15	0.03	25.	25.	232.
28	5	1985		7	600	4.2	4.3	4.3	27.8	27.8	27.8					94.	404.	8.6		0.01			0.	0.11	0.01	31.	31.	163.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A
28	5	1985		8	600	2.1	2.2	2.3	28.	28.	28.	33.	32.	30.	29.	128.	388.	8.2		0.28	0.01			0.97	1.45	15.	15.	27.
28	5	1985		9	600	5.4	5.5	5.5	28.	28.	28.					84.	280.	8.9		0.			0.02	0.12	0.04	17.	17.	176.
4	6	1985		12	600	2.2	2.2	2.3	28.	28.	28.					108.	228.	8.4		0.14			0.	0.92	0.7	11.	11.	280.
4	6	1985		2	600	4.3	4.3	4.3	28.	28.	28.	34.	32.	26.5	26.5	110.	396.	8.2		0.27			0.	0.7	0.45	20.	20.	75.
4	6	1985		3	600	4.4	4.4	4.6	28.2	28.2	28.2					120.	248.	8.3		0.33			0.	0.13	0.06	33.	33.	59.
4	6	1985		4	600	3.6	3.6	3.7	28.1	28.1	28.1	32.5	32.	26.5	26.	134.	344.	8.6		0.84				0.8	0.44	17.	17.	182.
4	6	1985		5	600	6.5	6.5	6.6	28.	28.	28.					68.	316.	8.6		0.05			0.	0.14	0.03	18.	18.	371.
4	6	1985		7	600	6.5	6.5	6.6	28.	28.	28.					70.	276.	8.4		0.04				0.11	0.01	22.	22.	372.
4	6	1985		8	600	1.7	1.6	1.6	28.5	28.5	28.5	34.	33.	26.	26.	140.	384.	7.9		0.19			0.	0.95	1.02	20.	20.	92.
4	6	1985		9	600	4.6	4.6	4.7	28.2	28.2	28.2					94.	260.	8.3		0.11			0.	0.09	0.03	27.	27.	142.
10	6	1985		12	600	2.3	2.4	2.5	26.2	26.2	26.2					120.	228.	8.5		0.02			0.	0.83	0.44	12.	12.	342.
10	6	1985		2	600	2.8	2.8	2.9	25.7	25.7	25.7	34.	32.	27.	27.	128.	416.	8.1		0.38			0.	0.96	0.95	29.	29.	80.
10	6	1985		3	600	4.4	4.4	4.5	26.7	26.7	26.7					144.	280.	8.2		0.04			0.	0.16	0.06	34.	34.	72.
10	6	1985		4	600	4.8	4.9	5.	26.5	26.5	26.5	33.	32.	28.	27.	132.	324.	8.7		0.02				0.59	0.21	19.	19.	216.
10	6	1985		5	600	5.7	5.7	5.8	26.7	26.7	26.7					120.	360.	8.6		0.02			0.	0.1	0.01	27.	27.	121.
10	6	1985		7	600	5.1	5.2	5.3	26.5	26.5	26.5					104.	428.	8.2		0.11			0.01	0.1	0.01	27.	27.	123.
10	6	1985		8	600	0.6	0.6	0.6	26.7	26.7	26.7	33.		28.		136.	408.	7.8		0.42			0.	1.13	1.11	34.	34.	163.
10	6	1985		9	600	5.	5.1	5.2	26.8	26.8	26.8					100.	260.	8.6		0.03			0.	0.11	0.02	20.	20.	174.
18	6	1985		12	600	2.4	2.4	2.5	29.	29.	29.					120.	204.	7.7		0.31			0.	0.77	0.71	18.	18.	168.
18	6	1985		2	600	3.7	3.7	3.7	28.8	28.8	28.8	33.	31.5	28.	27.5	120.	400.	7.9		0.38			0.01	0.82	0.78	22.	22.	72.
18	6	1985		3	600	4.6	4.6	4.6	28.8	28.8	28.8					148.	272.	8.		0.15			0.	0.07	0.07	34.	34.	37.
18	6	1985		4	600	2.6	2.6	2.6	28.9	28.9	28.9	33.	31.	28.	27.	108.	312.	8.		0.1				0.84	0.54	19.	19.	107.
18	6	1985		5	600	4.9	4.9	4.9	28.8	28.8	28.8					92.	348.	7.9		0.06			0.	0.11	0.04	29.	29.	59.
18	6	1985		7	600	5.	5.1	5.2	28.8	28.8	28.8	33.	32.5	27.	28.	112.	416.	7.7		0.38				0.05	0.04	27.	27.	59.
18	6	1985		8	600	2.7	2.7	2.8	29.	29.	29.	33.	32.5	27.	28.	156.	396.	7.4		0.44			0.	1.02	1.08	24.	24.	67.
18	6	1985		9	600	4.4	4.4	4.4	29.	29.	29.					120.	304.	6.8		0.06				0.11	0.07	33.	33.	43.
25	6	1985		12	600	2.8	2.8	2.8	29.	29.	29.					112.	260.	8.7		0.13			0.01	0.6	0.51	18.	18.	406.
25	6	1985		2	600	3.2	3.2	3.2	28.5	28.5	28.5	32.	31.5	27.5	27.5	130.	408.	8.3		0.02			0.01	0.52	0.47	19.	19.	48.
25	6	1985		3	600	4.3	4.3	4.1	29.	29.	29.					136.	252.	8.4		0.02			0.	0.16	1.01	33.	33.	40.
25	6	1985		4	600	3.9	3.8	3.8	28.5	28.5	28.5	32.	32.	27.5	27.5	96.	284.	8.8		0.03				0.66	0.36	19.	19.	96.
25	6	1985		5	600	4.8	4.8	4.7	29.	29.	29.					104.	300.	8.4		0.14			0.	0.94	1.03	24.	24.	352.
25	6	1985		7	600	2.5	2.5	2.5	28.5	28.5	28.5					132.	400.	7.8		0.03			0.	0.11	0.09	35.	35.	138.
25	6	1985		8	600	2.	2.	2.	29.	29.	29.	32.	31.	27.	28.	156.	384.	8.6		0.33			0.03	0.78	0.73	22.	22.	67.
25	6	1985		9	600	4.7	4.7	4.7	29.	29.	29.					130.	308.	8.5		0.01			0.	0.11	0.06	33.	33.	27.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND$	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
31	7	1985		12														8.		0.05			0.	0.38	0.37				
31	7	1985		2														8.2		0.05			0.	0.61	0.58				
31	7	1985		3														7.9		0.02			0.	0.06	0.02				
31	7	1985		4														8.3		0.4			0.	0.22	0.1				
31	7	1985		5														8.7		0.09		0.02	0.02	0.06	0.01				
31	7	1985		7														8.5		0.2		0.01	0.01	0.05	0.01				
31	7	1985		8														8.7		0.02			0.	0.9	0.86				
31	7	1985		9														8.6		0.07			0.	0.06	0.02				
1	8	1985		12		6.	6.	6.	27.5	27.5	27.5					200.	436.	7.8		0.21		0.01	0.01	1.04	0.95				
1	8	1985		2		4.5	4.5	4.6	28.	28.	28.					152.	308.	7.7		0.5		0.01	0.01	1.32	1.3				
1	8	1985		3		5.5	5.5	5.7	28.	28.	28.					160.	388.	7.9		0.06		0.03	0.03	0.07	0.02				
1	8	1985		4		6.4	6.5	6.5	28.	28.	28.					140.	352.	8.2		0.29		0.01	0.01	0.22	1.02				
1	8	1985		5		8.2	8.2	8.3	27.	27.	27.					112.	280.	8.5		0.07		0.03	0.03	0.11	0.02				
1	8	1985		7		7.3	7.3	7.3	27.5	27.5	27.5					128.	336.	8.4		0.2		0.01	0.01	0.08	0.				
1	8	1985		8		4.2	4.2	4.3	27.5	27.5	27.5					168.	452.	8.		0.42		0.01	0.01	1.21	1.19				
1	8	1985		9		8.	8.	8.	27.5	27.5	27.5					100.	348.	8.5		0.17		0.08	0.08	0.11	0.02				
5	8	1985		12		2.8	2.8	2.8	31.	31.	31.	35.	31.	29.7	29.	204.	396.	8.1											
5	8	1985		2		2.6	2.6	2.7	31.	31.	31.	35.	31.	29.7	29.	160.	280.	7.8											
5	8	1985		3		3.4	3.4	3.4	30.5	30.5	30.5	30.5	31.	29.7	29.	136.	360.	7.5											
5	8	1985		4		3.4	3.4	3.7	30.	30.	30.	35.	31.	29.7	29.	136.	268.	8.											
5	8	1985		5		1.5	1.6	1.6	30.	30.	30.	35.	31.	29.7	29.	104.	228.	7.9											
5	8	1985		7		5.1	5.1	5.1	30.	30.	30.	35.	31.	29.7	29.	100.	320.	8.2											
5	8	1985		8		4.6	4.7	4.7	30.5	30.5	30.5	35.	31.	29.7	29.	168.	312.	8.4											
5	8	1985		9		3.9	3.9	3.9	39.	30.	30.	35.	31.	29.7	29.	88.	300.	8.6											
6	8	1985		12																0.04		0.02	0.02	1.21	1.19	32.			120.
6	8	1985		2																0.18		0.02	0.02	1.43	1.4	35.			45.
6	8	1985		3																0.04		0.03	0.03	0.02	0.15	35.			59.
6	8	1985		4																0.17		0.03	0.03	1.21	1.19	38.			115.
6	8	1985		5																0.08		0.09	0.09	0.25	0.09	33.			187.
6	8	1985		7																0.07		0.06	0.06	0.19	0.04	28.			163.
6	8	1985		8																0.2		0.05	0.05	1.21	1.19	30.			110.
6	8	1985		9																0.03		0.01	0.01	0.08	0.02	22.			278.
9	8	1985		12																						24.			176.
9	8	1985		2																						27.			144.
9	8	1985		3																						29.			51.
9	8	1985		4																						27.			203.
9	8	1985		5																						21.			489.
9	8	1985		7																						22.			384.
9	8	1985		8																						27.			179.
9	8	1985		9																						26.			310.
12	8	1985		12		3.3	3.3	3.4	28.	28.	28.	33.3	30.3	27.8	27.5	160.	480.	7.8											
12	8	1985		2		3.	3.1	3.2	28.	28.	28.	33.3	30.3	27.8	27.5	172.	368.	7.4											
12	8	1985		3		4.1	4.1	4.2	28.	28.	28.	33.3	30.3	27.8	27.5	156.	412.	7.3											
12	8	1985		4		3.4	3.4	3.6	28.	28.	28.	33.3	30.3	27.8	27.5	140.	440.	7.7											

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
12	8	1985		5		3.	3.	3.1	28.	28.	28.	33.3	30.3	27.8	27.5	92.	252.	8.5										
12	8	1985		7		3.2	3.2	3.3	28.	28.	28.	33.3	30.3	27.8	27.5	108.	364.	7.5										
12	8	1985		8		3.2	3.3	3.4	28.	28.	28.	33.3	30.3	27.8	27.5	132.	380.	7.7										
12	8	1985		9		4.2	4.2	4.3	28.	28.	28.	33.3	30.3	27.8	27.5	96.	308.	8.3										
13	8	1985		12																0.18		0.01	0.01	1.45	1.39	27.			80.
13	8	1985		2																		0.02	0.03	1.45	1.39	17.			19.
13	8	1985		3																0.04	0.02	0.08	0.1	0.14	0.06	31.			43.
13	8	1985		4																0.22	0.01	0.01	0.02	1.45	1.39	20.			94.
13	8	1985		5																0.03	0.02	0.12	0.14	0.29	0.07	10.			432.
13	8	1985		7																0.15	0.02	0.11	0.13	0.16		22.			171.
13	8	1985		8																0.45	0.01	0.02	0.03	1.45	1.39	20.			61.
13	8	1985		9																0.03	0.01	0.05	0.06	0.16	0.02	15.			318.
15	8	1985		12												184.	380.												
15	8	1985		2												160.	288.			0.54	0.01								
15	8	1985		3												164.	356.												
15	8	1985		4												1148.	292.												
15	8	1985		5												128.	220.												
15	8	1985		7												88.	336.												
15	8	1985		8												160.	352.												
15	8	1985		9												96.	292.												
16	8	1985		12																						25.			96.
16	8	1985		2																						34.			134.
16	8	1985		3																						37.			32.
16	8	1985		4																						25.			110.
16	8	1985		5																						25.			302.
16	8	1985		7																						23.			224.
16	8	1985		8																						27.			81.
16	8	1985		9																						21.			358.
19	8	1985		12		4.5	4.7	4.9	31.	31.	31.	34.8	32.3	28.2	27.5	176.	340.	8.5										
19	8	1985		2		3.8	3.9	4.1	31.	31.	31.	34.8	32.3	28.2	27.5	212.	316.	8.1										
19	8	1985		3		6.4	6.4	6.4	31.	31.	31.	34.8	32.3	28.2	27.5	200.	432.	8.2										
19	8	1985		4		4.6	4.6	4.7	31.	31.	31.	34.8	32.3	28.2	27.5	156.	292.	8.6										
19	8	1985		5		2.2	2.4	2.5	31.	31.	31.	34.8	32.3	28.2	27.5	160.	256.	8.4										
19	8	1985		7		3.2	3.4	3.7	30.5	30.5	30.5	34.8	32.3	28.2	27.5	148.	356.	8.1										
19	8	1985		8		4.9	5.2	5.4	31.	31.	31.	34.8	32.3	28.2	27.5	188.	352.	8.3										
19	8	1985		9		2.5	2.7	2.8	31.	31.	31.	34.8	32.3	28.2	27.5	116.	272.	8.1										
20	8	1985		12																0.11				1.26	1.09	26.			107.
20	8	1985		2																0.32	0.01	0.2	0.03	1.48	1.43	22.			61.
20	8	1985		3																0.04	0.03	0.16	0.19	0.06	0.04	36.			32.
20	8	1985		4																0.1	0.01		0.01	1.19	1.15	22.			53.
20	8	1985		5																0.03				0.12	0.03	22.			250.
20	8	1985		7																0.04	0.01	0.02	0.03	0.06	0.01	23.			256.
20	8	1985		8																0.23	0.01		0.01	1.26	1.21	26.			110.
20	8	1985		9																0.03		0.01	0.01	0.05	0.02	17.			224.
23	8	1985		12																						26.			155.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
23	8	1985		2																					29.			80.
23	8	1985		3																					38.			51.
23	8	1985		4																					30.			85.
23	8	1985		5																					23.			219.
23	8	1985		7																					25.			411.
23	8	1985		8																					24.			123.
23	8	1985		9																					20.			315.
26	8	1985		12		4.4	4.4	4.5	29.	29.	29.	34.3	31.3	28.3	28.	240.	232.	8.8										
26	8	1985		2		4.3	4.3	4.3	29.	29.	29.	34.3	31.3	28.3	28.	208.	332.	7.9										
26	8	1985		3		3.9	3.9	3.9	29.	29.	29.	34.3	31.3	28.3	28.	168.	356.	8.2										
26	8	1985		4		3.7	3.7	3.8	29.	29.	29.	34.3	31.3	28.3	28.	192.	304.	8.6										
26	8	1985		5		3.9	3.9	4.	29.	29.	29.	34.3	31.3	28.3	28.	144.	280.	8.2										
26	8	1985		7		2.9	2.9	3.	29.	29.	29.	34.3	31.3	28.3	28.	148.	352.	8.4										
26	8	1985		8		4.9	5.	5.	29.	29.	29.	34.3	31.3	28.3	28.	188.	352.	8.6										
26	8	1985		9		1.1	1.1	1.2	29.	29.	29.	34.3	31.3	28.3	28.	136.	316.	8.2										
27	8	1985		12															0.09		0.01	0.01	1.05	0.67	24.			184.
27	8	1985		2															0.33	0.01		0.01	1.84	1.75	25.			107.
27	8	1985		3															0.06	0.02		0.02	0.17	0.15	40.			24.
27	8	1985		4															0.14	0.01	0.01	0.02	1.44	1.41	23.			48.
27	8	1985		5															0.09		0.01	0.01	0.15	0.07	20.			187.
27	8	1985		7															0.1		0.02	0.02	0.12	0.01	34.			104.
27	8	1985		8															0.25	0.01		0.01	1.59	1.56	23.			85.
27	8	1985		9															0.26	0.01	0.09	0.1	0.34	0.22	29.			53.
30	8	1985		12																					29.			270.
30	8	1985		2																					24.			56.
30	8	1985		3																					39.			123.
30	8	1985		4																					24.			118.
30	8	1985		5																					26.			195.
30	8	1985		7																					29.			99.
30	8	1985		8																					24.			114.
30	8	1985		9																					29.			128.
2	9	1985		12		3.7	3.8	3.9	29.	29.	29.	34.7	31.8	27.7	28.	180.	384.	8.6										
2	9	1985		2		3.	3.1	3.2	29.	29.	29.	34.7	31.8	27.7	28.	146.	444.	8.3										
2	9	1985		3		4.2	4.3	4.4	29.	29.	29.	34.7	31.8	27.7	28.	138.	460.	8.2										
2	9	1985		4		3.2	3.3	3.4	29.	29.	29.	34.7	31.8	27.7	28.	148.	376.	8.6										
2	9	1985		5		3.5	3.5	3.6	29.	29.	29.	34.7	31.8	27.7	28.	122.	280.	8.1										
2	9	1985		7		5.	5.2	5.4	29.	29.	29.	34.7	31.8	27.7	28.	116.	412.	8.3										
2	9	1985		8		3.4	3.5	3.7	29.	29.	29.	34.7	31.8	27.7	28.	180.	448.	8.4										
2	9	1985		9		5.3	5.3	5.4	29.	29.	29.	34.7	31.8	27.7	28.	96.	372.	8.4										
3	9	1985		12															0.14	0.01		0.01	1.02	0.75	23.			200.
3	9	1985		2															0.24	0.01		0.01	1.5	1.34	21.			64.
3	9	1985		3															0.04		0.01	0.01	0.12	0.04	38.			67.
3	9	1985		4															0.11	0.01		0.01	1.15	1.1	19.			94.
3	9	1985		5															0.05	0.01		0.01	0.07	0.03	23.			91.
3	9	1985		7															0.04		0.01	0.01	0.08	0.01	29.			72.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
3	9	1985		8																0.23	0.01		0.01	1.23	1.03	26.			59.
3	9	1985		9																0.06		0.01	0.01	0.13	0.01	37.			64.
6	9	1985		12																						20.			288.
6	9	1985		2																						24.			67.
6	9	1985		3																						37.			72.
6	9	1985		4																						19.			118.
6	9	1985		5																						33.			131.
6	9	1985		7																						34.			64.
6	9	1985		8																						24.			94.
6	9	1985		9																						34.			91.
10	9	1985		12		3.7	3.8	4.	28.	28.	28.	33.8	30.2	28.	27.8	172.	340.	8.1		0.07	0.01		0.02	1.07	0.9	10.			230.
10	9	1985		2		3.6	3.7	3.8	28.	28.	28.	33.8	30.2	28.	27.8	176.	396.	8.1		0.41	0.01	0.01	0.02	1.65	1.58	21.			37.
10	9	1985		3		6.3	6.4	6.6	28.5	28.5	28.5	33.8	30.2	28.	27.8	152.	368.	8.		0.04	0.01	0.04	0.05	0.15	0.09	21.			67.
10	9	1985		4		3.7	3.8	3.8	28.	28.	28.	33.8	30.2	28.	27.8	164.	336.	7.9		0.15	0.01		0.01	1.42	1.4	16.			94.
10	9	1985		5		7.8	7.9	8.	28.	28.	28.	33.8	30.2	28.	27.8	128.	276.	8.3		0.05	0.01	0.11	0.12	0.1	0.02	16.			179.
10	9	1985		7		5.5	5.7	5.7	28.	28.	28.	33.8	30.2	28.	27.8	124.	408.	7.5		0.04	0.01	0.04	0.05	0.1	0.06	34.			51.
10	9	1985		8		4.8	4.9	5.	28.	28.	28.	33.8	30.2	28.	27.8	188.	380.	7.9		0.22	0.01		0.01	1.23	1.12	17.			64.
10	9	1985		9		4.6	4.7	4.8	28.	28.	28.	33.8	30.2	28.	27.8	128.	356.	8.1		0.04	0.01		0.01	0.08	0.04	29.			91.
13	9	1985		12																						21.			248.
13	9	1985		2																						23.			115.
13	9	1985		3																						36.			80.
13	9	1985		4																						20.			203.
13	9	1985		5																						27.			230.
13	9	1985		7																						27.			142.
13	9	1985		8																						26.			80.
13	9	1985		9																						40.			80.
17	9	1985		12		7.1	6.9	6.9	27.5	27.5	27.5	34.	31.	27.	27.	240.	308.	8.2		0.22				0.76	0.68	18.			200.
17	9	1985		2		7.	6.6	6.5	27.5	27.5	27.5	34.	31.	27.	27.	160.	288.	7.6		0.26	0.01	0.02	0.03	1.33	1.31	24.			32.
17	9	1985		3		7.3	7.1	7.	27.5	27.5	27.5	34.	31.	27.	27.	168.	300.	7.6		0.02				0.12	0.1	25.			51.
17	9	1985		4		6.3	6.3	6.3	27.5	27.5	27.5	34.	31.	27.	27.	136.	260.	7.8		0.08		0.01	0.01	1.03	1.03	17.			88.
17	9	1985		5		6.	5.8	5.7	27.5	27.5	27.5	34.	31.	27.	27.	128.	228.	7.7		0.18		0.11	0.11	0.06	0.05	27.			227.
17	9	1985		7		7.3	7.3	7.8	27.5	27.5	27.5	34.	31.	27.	27.	160.	308.	7.3		0.46	0.01	0.31	0.32	0.05	0.03	37.			51.
17	9	1985		8		8.2	7.5	7.5	28.	28.	28.	34.	31.	27.	27.	156.	336.	7.9		0.29				0.94	0.91	29.			51.
17	9	1985		9		7.9	7.9	7.9	28.	28.	28.	34.	31.	27.	27.	124.	276.	7.7		0.27		0.02	0.02	0.05	0.03	26.			77.
20	9	1985		12																						15.			155.
20	9	1985		2																						24.			80.
20	9	1985		3																						25.			43.
20	9	1985		4																						24.			80.
20	9	1985		5																						29.			107.
20	9	1985		7																						34.			46.
20	9	1985		8																						21.			67.
20	9	1985		9																						28.			51.
24	9	1985		12		4.6	4.6	4.6	29.5	29.5	29.5	34.	32.	28.3	28.	160.	328.	7.4		0.13				1.03	0.93	13.			174.
24	9	1985		2		2.8	2.8	2.8	29.5	29.5	29.	34.	32.	28.3	28.	176.	332.	7.7		0.32	0.01	0.01	0.02	1.47	1.35	27.			48.
24	9	1985		3		6.	6.	6.1	29.5	29.5	29.5	34.	32.	28.3	28.	148.	328.	7.5		0.03	0.01	0.1	0.11	0.14	0.13	43.			61.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle III, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
24	9	1985		4		4.	4.1	4.1	29.	29.	29.	34.	32.	28.3	28.	156.	312.	7.7		0.17	0.01		0.01	1.21	1.13	21.			91.
24	9	1985		5		3.7	3.7	3.8	29.5	29.5	29.5	34.	32.	28.3	28.	124.	276.	7.4		0.04	0.01	0.04	0.05	0.08	0.06	38.			56.
24	9	1985		7		5.5	5.5	5.6	29.5	29.5	29.5	34.	32.	28.3	28.	128.	292.	7.6		0.05	0.01	0.11	0.12	0.07	0.05	25.			37.
24	9	1985		8		3.5	3.5	3.6	29.5	29.5	29.5	34.	32.	28.3	28.	180.	440.	7.5		0.26		0.02	0.02	1.39	1.36	15.			80.
24	9	1985		9		4.6	4.7	4.7	29.5	29.5	29.5	34.	32.	28.3	28.	112.	328.	7.		0.04	0.01	0.05	0.06	0.09	0.07	34.			67.
27	9	1985		12																						20.			283.
27	9	1985		2																						20.			59.
27	9	1985		3																						29.			67.
27	9	1985		4																						16.			102.
27	9	1985		5																						36.			40.
27	9	1985		7																						39.			80.
27	9	1985		8																						21.			142.
27	9	1985		9																						45.			51.
1	10	1985		12		4.9	4.9	4.9	30.5	30.5	30.5	35.	33.3	29.2	28.3	160.	356.	9.7		0.1				1.	0.61	20.			187.
1	10	1985		2		3.2	3.2	3.3	30.5	30.5	30.5	35.	33.3	29.2	28.3	176.	352.	8.3		0.21	0.01	0.01	0.01	1.64	1.33	16.			75.
1	10	1985		3		5.4	5.4	5.5	31.	31.	31.	35.	33.3	29.2	28.3	148.	396.	8.2		0.03		0.05	0.05	0.17	0.09	30.			72.
1	10	1985		4		3.5	3.5	3.6	30.5	30.5	30.5	35.	33.3	29.2	28.3	160.	416.	8.1		0.13	0.02	0.01	0.03	1.26	0.88	20.			88.
1	10	1985		5		4.	4.1	4.1	31.	31.	31.	35.	33.3	29.2	28.3	140.	308.	7.9		0.03	0.01	0.04	0.05	0.1	0.04	46.			59.
1	10	1985		7		4.4	4.4	4.5	30.5	30.5	30.5	35.	33.3	29.2	28.3	112.	360.	8.1		0.01		0.01	0.01	0.13	0.03	35.			120.
1	10	1985		8		4.5	4.6	4.6	31.	31.	31.	35.	33.3	29.2	28.3	192.	528.	8.3		0.1	0.01		0.01	1.25	1.02	20.			112.
1	10	1985		9		4.4	4.4	4.5	31.	31.	31.	35.	33.3	29.2	28.3	144.	348.	8.1		0.03		0.01	0.01	0.06	0.05	45.			51.
4	10	1985		12																						16.			232.
4	10	1985		2																						19.			119.
4	10	1985		3																						27.			96.
4	10	1985		4																						18.			114.
4	10	1985		5																						35.			93.
4	10	1985		7																						32.			25.
4	10	1985		8																						20.			134.
4	10	1985		9																						42.			51.
8	10	1985		12		3.6	3.6	3.7	28.	28.	28.	35.3	33.3	27.7	27.3	168.	320.	8.2		0.06	0.02	0.03	0.05	0.82	0.57	18.			219.
8	10	1985		2		3.2	3.2	3.2	28.5	28.5	28.5	35.3	33.3	27.7	27.3	200.	348.	8.3		0.07	0.01	0.01	0.02	1.15	1.05	22.			72.
8	10	1985		3		5.8	5.8	5.8	28.5	28.5	28.5	35.3	33.3	27.7	27.3	132.	324.	7.9		0.02	0.01	0.23	0.24	0.17	0.07	30.			192.
8	10	1985		4		2.8	2.8	2.8	28.8	28.8	28.8	35.3	33.3	27.7	27.3	180.	388.	8.3		0.12	0.01	0.03	0.04	1.	0.88	21.			163.
8	10	1985		5		3.8	3.8	3.8	29.	29.	29.	35.3	33.3	27.7	27.3	200.	292.	7.3		0.07		0.03	0.03	0.06	0.02	38.			155.
8	10	1985		7		4.3	4.3	4.4	28.	28.	28.	35.3	33.3	27.7	27.3	136.	340.	7.6		0.05	0.01	0.35	0.36	0.12	0.05	31.			43.
8	10	1985		8		4.1	4.2	4.3	28.	28.	28.	35.3	33.3	27.7	27.3	148.	496.	8.1		0.07		0.02	0.02	1.15	0.93	19.			144.
8	10	1985		9		4.9	4.9	5.	28.8	28.8	28.8	35.3	33.3	27.7	27.3	152.	328.	7.5		0.04	0.01	0.07	0.08	0.09	0.07	40.			37.
11	10	1985		12																						15.			187.
11	10	1985		2																						17.			32.
11	10	1985		3																						24.			35.
11	10	1985		4																						16.			59.
11	10	1985		5																						34.			24.
11	10	1985		7																						29.			24.
11	10	1985		8																						23.			83.
11	10	1985		9																						39.			40.
15	10	1985		12		2.7	2.8	2.8	27.	27.	27.	33.5	31.7	27.8	27.8	184.	336.	8.5		0.13				1.01	0.88	15.			192.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
15	10	1985		2		3.	3.	3.1	27.	27.	27.	33.5	31.7	27.8	27.8	184.	356.	8.1		0.3	0.01		0.01	1.56	1.46	21.			80.
15	10	1985		3		4.1	4.1	4.1	27.	27.	27.	33.5	31.7	27.8	27.8	136.	328.	7.8		0.01	0.01	0.08	0.09	0.23	0.14	41.			80.
15	10	1985		4		2.6	2.6	2.7	27.	27.	27.	33.5	31.7	27.8	27.8	176.	364.	8.3		0.28				1.29	1.2	20.			115.
15	10	1985		5		3.	3.	3.1	27.	27.	27.	33.5	31.7	27.8	27.8	168.	284.	7.4		0.17	0.02	0.14	0.16	0.07	0.05	38.			59.
15	10	1985		7		4.2	4.3	4.4	27.	27.	27.	33.5	31.7	27.8	27.8	156.	356.	7.9		0.09	0.01	0.19	0.2	0.07	0.05	38.			53.
15	10	1985		8		4.	4.1	4.2	27.	27.	27.	33.5	31.7	27.8	27.8	212.	512.	8.2		0.16				1.19	1.06	24.			171.
15	10	1985		9		4.5	4.5	4.6	27.	27.	27.	33.5	31.7	27.8	27.8	168.	340.	7.7		0.01	0.01	0.04	0.05	0.07	0.07	41.			45.
18	10	1985		12																						17.			238.
18	10	1985		2																						24.			123.
18	10	1985		3																						25.			128.
18	10	1985		4																						24.			198.
18	10	1985		5																						40.			59.
18	10	1985		7																						37.			72.
18	10	1985		8																						25.			126.
18	10	1985		9																						33.			40.
21	10	1985		12		2.7	2.5	2.5	29.5	29.5	29.5	33.7	31.	27.5	27.2	192.	340.	8.5											
21	10	1985		2		3.7	3.7	3.7	29.2	29.	29.	33.7	31.	27.5	27.2	208.	376.	8.9											
21	10	1985		3		4.3	4.3	4.4	29.5	29.5	29.5	33.7	31.	27.5	27.2	200.	344.	8.5											
21	10	1985		4		3.3	3.4	3.4	29.5	29.	29.	33.7	31.	27.5	27.2	188.	368.	8.9											
21	10	1985		5		4.1	4.2	4.2	29.5	29.	29.	33.7	31.	27.5	27.2	180.	276.	8.2											
21	10	1985		7		5.	5.	5.	29.	29.	29.	33.7	31.	27.5	27.2	192.	360.	8.3											
21	10	1985		8		4.	4.1	4.2	29.	29.	29.	33.7	31.	27.5	27.2	228.	540.	8.5											
21	10	1985		9		5.6	5.6	5.7	29.	29.	29.	33.7	31.	27.5	27.2	164.	352.	7.9											
22	10	1985		12																0.2				1.12	0.97	20.			147.
22	10	1985		2																0.21		0.01	0.01	1.43	1.02	24.			64.
22	10	1985		3																0.04	0.01	0.05	0.06	0.15	0.1	35.			67.
22	10	1985		4																0.26		0.02	0.02	1.26	1.02	24.			67.
22	10	1985		5																0.03	0.02	0.15	0.17	0.04	0.03	34.			67.
22	10	1985		7																0.01						30.			61.
22	10	1985		8																0.1				1.22	0.97	27.			88.
22	10	1985		9																0.03	0.02	0.03	0.05	0.05	0.02	35.			69.
25	10	1985		12																						25.			118.
25	10	1985		2																						22.			80.
25	10	1985		3																						34.			53.
25	10	1985		4																						17.			80.
25	10	1985		5																						38.			75.
25	10	1985		7																		0.01	0.01	0.04	0.01	29.			48.
25	10	1985		8																						22.			171.
25	10	1985		9																						33.			72.
28	10	1985		12		2.1	2.1	2.1	29.5	29.5	29.5	34.3	32.5	27.7	27.3	196.	348.	8.1											
28	10	1985		2		3.5	3.6	3.6	29.2	29.2	29.2	34.3	32.5	27.7	27.3	224.	388.	8.4											
28	10	1985		3		2.7	2.7	2.7	29.5	29.5	29.5	34.3	32.5	27.7	27.3	180.	380.	8.											
28	10	1985		4		2.8	2.8	2.8	29.	29.	29.	34.3	32.5	27.7	27.3	220.	384.	8.5											
28	10	1985		5		2.5	2.5	2.5	29.5	29.5	29.5	34.3	32.5	27.7	27.3	176.	293.	8.1											
28	10	1985		7		1.5	1.5	1.5	29.	29.	29.	34.3	32.5	27.7	27.3	164.	364.	7.8											

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
28	10	1985		8		3.3	3.3	3.3	29.	29.	29.	34.3	32.5	27.7	27.3	220.	556.	8.5											
28	10	1985		9		3.8	3.8	3.8	29.5	29.5	29.5	34.3	32.5	27.7	27.3	180.	352.	7.6											
29	10	1985		12																0.23	0.01	0.01	0.02	1.27	1.08	25.			75.
29	10	1985		2																0.21	0.01	0.02	0.03	1.25	1.11	28.			67.
29	10	1985		3																0.04				0.12	0.09	37.			67.
29	10	1985		4																0.29	0.01	0.03	0.04	1.21	1.14	24.			72.
29	10	1985		5																0.04				0.09	0.08	38.			59.
29	10	1985		7																0.16				0.08	0.08	39.			45.
29	10	1985		8																0.09				1.14	1.08	26.			155.
29	10	1985		9																0.16				0.05	0.02	36.			94.
1	11	1985		12																						23.			131.
1	11	1985		2																						25.			94.
1	11	1985		3																						31.			64.
1	11	1985		4																						20.			123.
1	11	1985		5																						37.			61.
1	11	1985		7																						37.			77.
1	11	1985		8																						19.			206.
1	11	1985		9																						29.			104.
4	11	1985		12		3.2	3.2	3.2	28.	28.	28.	34.8	33.2	27.7	27.	220.	452.	8.4											
4	11	1985		2		4.2	4.2	4.2	28.	28.	28.	34.8	33.2	27.7	27.	204.	404.	8.5											
4	11	1985		3		4.2	4.2	4.3	28.	28.	28.	34.8	33.2	27.7	27.	168.	420.	7.8											
4	11	1985		4		4.2	4.2	4.2	28.	28.	28.	34.8	33.2	27.7	27.	200.	376.	8.4											
4	11	1985		5		3.2	3.2	3.2	28.	28.	28.	34.8	33.2	27.7	27.	188.	328.	7.7											
4	11	1985		7		3.5	3.5	3.5	28.	28.	28.	34.8	33.2	27.7	27.	144.	368.	7.7											
4	11	1985		8		5.	5.	5.	28.	28.	28.	34.8	33.2	27.7	27.	208.	572.	8.4											
4	11	1985		9		4.4	4.4	4.4	28.	28.	28.	34.8	33.2	27.7	27.	136.	364.	7.6											
5	11	1985		12																0.16		0.01	0.01	0.92	0.82	17.			80.
5	11	1985		2																0.11		0.01	0.01	0.93	0.66	21.			59.
5	11	1985		3																0.01	0.01	0.25	0.26	0.1	0.06	23.			91.
5	11	1985		4																0.11		0.01	0.01	0.92	0.76	17.			80.
5	11	1985		5																0.08	0.02	0.33	0.35	0.01	0.04	31.			64.
5	11	1985		7																0.09	0.01	0.08	0.09	0.08	0.02	23.			126.
5	11	1985		8																0.09		0.01	0.01	1.09	0.67	17.			88.
5	11	1985		9																0.08	0.01	0.17	0.18	0.06	0.01	26.			96.
8	11	1985		12																									168.
8	11	1985		2																									96.
8	11	1985		3																						22.			53.
8	11	1985		4																									102.
8	11	1985		5																									61.
8	11	1985		7																									176.
8	11	1985		8																									315.
8	11	1985		9																									160.
13	11	1985		12		4.2	4.2	4.2	29.	29.	29.	34.3	32.3	28.3	28.	176.	428.	8.7		0.05	0.01		0.01	0.55	0.39	14.			251.
13	11	1985		2		5.3	5.3	5.3	29.	29.	29.	34.3	32.3	28.3	28.	140.	512.	8.2		0.26	0.01	0.05	0.06	0.87	0.71	21.			83.
13	11	1985		3		4.7	4.7	4.7	29.2	29.2	29.2	34.3	32.3	28.3	28.	144.	484.	7.9		0.03				0.12	0.09	24.			69.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
13	11	1985		4		4.4	4.4	4.4	29.	29.	29.	34.3	32.3	28.3	28.	196.	496.	8.3		0.16	0.01	0.03	0.04	0.64	0.47	14.			101.
13	11	1985		5		4.2	4.2	4.2	29.5	29.5	29.5	34.3	32.3	28.3	28.	172.	392.	7.8		0.03		0.01	0.01	0.11	0.03	25.			83.
13	11	1985		7		4.9	4.9	4.9	29.	29.	29.	34.3	32.3	28.3	28.	132.	416.	8.		0.05				0.08	0.07	21.			83.
13	11	1985		8		4.7	4.7	4.7	29.	29.	29.	34.3	32.3	28.3	28.	196.	708.	8.4		0.17		0.01	0.01	0.98	0.68	20.			278.
13	11	1985		9		4.6	4.6	4.7	29.5	29.5	29.5	34.3	32.3	28.3	28.	196.	436.	8.		0.03				0.04		27.			134.
15	11	1985		12																						19.			136.
15	11	1985		2																						22.			67.
15	11	1985		3																						27.			107.
15	11	1985		4																						20.			83.
15	11	1985		5																						29.			69.
15	11	1985		7																						29.			24.
15	11	1985		8																						20.			224.
15	11	1985		9																						33.			123.
19	11	1985		12		4.1	4.	3.8	28.	28.	28.	32.8	31.	28.	27.8	192.	416.	8.9		0.03	0.01	0.01	0.02	1.05	0.43	14.			121.
19	11	1985		2		4.6	4.6	4.6	28.2	28.2	28.2	32.8	31.	28.	27.8	264.	504.	8.5		0.15	0.01	0.01	0.02	0.97	0.42	22.			53.
19	11	1985		3		1.7	1.7	1.7	28.2	28.2	28.2	32.8	31.	28.	27.8	268.	488.	7.5		0.05				0.25	0.08	22.			72.
19	11	1985		4		4.4	4.4	4.5	28.	28.	28.	32.8	31.	28.	27.8	272.	496.	9.1		0.06		0.02	0.02	0.94	0.43	19.			85.
19	11	1985		5		4.8	4.8	4.8	28.5	28.5	28.5	32.8	31.	28.	27.8	224.	364.	7.9						0.16	0.02	22.			88.
19	11	1985		7		1.5	1.5	1.6	28.	28.	28.	32.8	31.	28.	27.8	204.	428.	7.9		0.08				0.27	0.1	23.			72.
19	11	1985		8		4.	4.	3.8	28.	28.	28.	32.8	31.	28.	27.8	248.	672.	8.6		0.02	0.01		0.01	1.33	0.61	17.			224.
19	11	1985		9		3.	3.1	3.2	28.2	28.2	28.2	32.8	31.	28.	27.8	140.	480.	7.8		0.01				0.14	0.02	23.			82.
21	11	1985		12																						17.			190.
21	11	1985		2																						25.			72.
21	11	1985		3																						21.			120.
21	11	1985		4																						24.			144.
21	11	1985		5																						30.			83.
21	11	1985		7																						26.			128.
21	11	1985		8																						17.			123.
21	11	1985		9																						25.			152.
25	11	1985		12																0.12	0.05	0.01	0.06	1.04	0.54				
25	11	1985		2																0.14		0.02	0.02	0.97	0.53				
25	11	1985		3																0.07	0.01	0.38	0.41	0.21	0.03				
25	11	1985		4																0.07		0.02	0.02	1.06	0.5				
25	11	1985		5																0.08	0.02	0.38	0.4	0.19	0.01				
25	11	1985		7																0.11	0.02	0.37	0.39	0.27	0.1				
25	11	1985		8																0.07	0.09		0.09	1.12	0.64				
25	11	1985		9																0.04	0.04	0.15	0.19	0.23	0.01				
26	11	1985		12		1.	1.2	1.2	26.5	26.5	26.5	34.3	31.8	26.8	26.5	164.	404.	9.3								16.			235.
26	11	1985		2		4.3	4.3	4.3	27.	27.	27.	34.3	31.8	26.8	26.5	196.	456.	9.5								20.			75.
26	11	1985		3		3.6	3.6	3.7	27.	27.	27.	34.3	31.8	26.8	26.5	204.	404.	8.8								32.			96.
26	11	1985		4		3.9	3.9	3.9	28.	28.	28.	34.3	31.8	26.8	26.5	212.	468.	9.5								16.			126.
26	11	1985		5		4.	4.	4.	27.2	27.2	27.2	34.3	31.8	26.8	26.5	160.	364.	8.7								26.			120.
26	11	1985		7		2.8	2.8	2.9	27.	27.	27.	34.3	31.8	26.8	26.5	216.	468.	8.6								26.			73.
26	11	1985		8		3.1	3.2	3.2	26.8	26.8	26.8	34.3	31.8	26.8	26.5	236.	660.	9.2								17.			222.
26	11	1985		9		3.5	3.5	3.6	27.	27.	27.	34.3	31.8	26.8	26.5	132.	448.	8.4								23.			195.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
29	11	1985		2																						21.			144.
29	11	1985		3																						27.			131.
29	11	1985		4																						19.			227.
29	11	1985		5																						23.			195.
29	11	1985		7																						23.			136.
29	11	1985		8																						16.			534.
29	11	1985		9																						24.			216.
2	12	1985		12		3.1	3.2	3.2	27.	27.	27.	32.8	29.	27.	27.	142.	340.	9.2											
2	12	1985		2		5.4	5.4	5.4	27.	27.	27.	32.8	28.	27.	27.	200.	460.	9.2								16.			
2	12	1985		3		3.2	3.3	3.4	27.	27.	27.	32.8	29.	27.	27.	180.	416.	8.4											
2	12	1985		4		4.4	4.4	4.4	27.	27.	27.	32.8	29.	27.	27.	228.	456.	9.3											
2	12	1985		5		3.	3.1	3.1	27.	27.	27.	32.8	29.	27.	27.	176.	328.	8.4											
2	12	1985		7		3.5	3.6	3.6	27.	27.	27.	32.8	29.	27.	27.	220.	472.	8.3											
2	12	1985		8		3.7	3.7	3.8	27.	27.	27.	32.8	29.	27.	27.	232.	652.	9.											
2	12	1985		9		5.6	5.6	5.7	27.	27.	27.	32.8	29.	27.	27.	143.	352.	9.1											
3	12	1985		12																0.05	0.01		0.01	1.24	0.75	15.			235.
3	12	1985		2																0.05		0.01	0.01	0.95	0.46	17.			142.
3	12	1985		3																0.02	0.01	0.17	0.18	0.16	0.04	26.			96.
3	12	1985		4																0.05		0.01	0.01	0.97	0.4	16.			240.
3	12	1985		5																0.03	0.02	0.25	0.27	0.09	0.02	21.			174.
3	12	1985		7																0.03	0.01	0.31	0.32	0.17	0.05	26.			120.
3	12	1985		8																0.05		0.01	0.01	1.14	0.66	18.			414.
3	12	1985		9																0.07		0.07	0.07	0.09	0.02	25.			280.
6	12	1985		12																						14.			211.
6	12	1985		2																						19.			168.
6	12	1985		3																						30.			72.
6	12	1985		4																						16.			222.
6	12	1985		5																						27.			107.
6	12	1985		7																						26.			142.
6	12	1985		8																						15.			339.
6	12	1985		9																						23.			235.
10	12	1985		12		2.9	3.	3.	27.5	27.5	27.5	33.7	30.3	26.7	27.	132.	428.	9.4		0.02				0.85	0.52	29.			168.
10	12	1985		2		4.3	4.3	4.3	28.	28.	28.	33.7	30.3	26.7	27.	156.	532.	9.4		0.04		0.01	0.01	1.	0.42	13.			67.
10	12	1985		3		3.7	3.7	3.7	28.	28.	28.	33.7	30.3	26.7	27.	196.	500.	8.9		0.01	0.05	0.16	0.21	0.1	0.03	29.			67.
10	12	1985		4		2.4	2.4	2.4	28.	28.	28.	33.7	30.3	26.7	27.	192.	524.	9.3		0.03		0.01	0.01	0.85	0.37	19.			120.
10	12	1985		5		3.1	3.2	3.2	28.	28.	28.	33.7	30.3	26.7	27.	156.	448.	8.7		0.02	0.01	0.05	0.06	0.1	0.01	24.			134.
10	12	1985		7		4.	4.	4.	28.	28.	28.	33.7	30.3	26.7	27.	132.	520.	8.6		0.02	0.03	0.11	0.14	0.09	0.02	30.			118.
10	12	1985		8		2.8	2.8	2.9	27.5	27.5	27.5	33.7	30.3	26.7	27.	200.	460.	9.2		0.02				1.1	0.54	17.			272.
10	12	1985		9		4.	4.1	4.1	28.	28.	28.	33.7	30.3	26.7	27.	96.	460.	9.1		0.04	0.03	0.13	0.16	0.15	0.02	25.			195.
12	12	1985		12																						12.			219.
12	12	1985		2																						21.			166.
12	12	1985		3																						29.			72.
12	12	1985		4																						15.			206.
12	12	1985		5																						25.			166.
12	12	1985		7																						24.			115.

Table 3. Weekly and Twice-Weekly Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MO.	YEAR	EXTRA DATA?	POND#	DO TIME	DO @ TOP	DO @ MID	DO @ BOTTOM	WATER TEMP @ TOP	WATER TEMP @ MID	WATER TEMP @ BOTTOM	WATER TEMP @ TOP-MAX	WATER TEMP @ BOT-MAX	WATER TEMP @ TOP-MIN	WATER TEMP @ BOT-MIN	ALKA.	HARD.	pH	KJELDAHL N	NH3-N	NO2-N	NO3-N	TOTAL NO2 & NO3-N	TOTAL P	ORTHO PO4-P	SECHII DISK A	SECHII DISK B	CHLOR-OPHYLL A	CHLOR-A CORRECT
12	12	1985		8																					14.			342.
12	12	1985		9																					14.			222.
17	12	1985		12		5.8	5.7	5.7	20.5	21.	21.	33.7	30.7	22.5	22.5	100.	360.			0.33		0.01	0.01	1.01	0.34	11.			152.
17	12	1985		2		5.5	4.8	5.2	20.5	21.	21.5	33.7	30.7	26.7	27.	140.	464.			0.26		0.02	0.02	0.98	0.57	16.			88.
17	12	1985		3		6.4	6.4	6.4	20.5	21.	21.5	33.7	30.7	22.5	22.5	120.	360.			0.02		0.04	0.04	0.12	0.05	23.			110.
17	12	1985		4		4.8	4.8	4.7	21.	21.5	21.5	33.7	30.7	22.5	22.5	196.	452.			0.13		0.03	0.03	0.85	0.33	16.			123.
17	12	1985		5		5.6	5.5	5.5	21.5	21.5	21.5	33.7	30.7	22.5	22.5	128.	322.			0.01	0.01	0.07	0.08	0.17	0.02	24.			171.
17	12	1985		7		4.9	4.9	4.8	20.5	20.5	20.5	33.7	30.7	22.5	22.5	176.	480.			0.02	0.01	0.1	0.11	0.18	0.06	24.			96.
17	12	1985		8		5.5	5.5	20.	20.5	20.5	33.7		30.7	22.5	22.5	228.	700.			0.08		0.01	0.01	0.86	0.51	13.			288.
17	12	1985		9		5.7	5.6	5.6	21.	21.	21.	33.7	30.7	22.5	22.5	96.	372.				0.01	0.05	0.06	0.15	0.02	27.			184.
20	12	1985		12																					12.			206.
20	12	1985		2																								88.
20	12	1985		3																					21.			120.
20	12	1985		4																					18.			155.
20	12	1985		5																					19.			195.
20	12	1985		7																					10.			91.
20	12	1985		8																					9.			344.
20	12	1985		9																					13.			198.
24	12	1985		12		5.2	5.2	5.2	22.2	22.2	22.2	31.	27.8	23.2	22.7	132.	364.			0.04	0.01		0.01	0.91	0.39				
24	12	1985		2		5.7	5.6	5.6	23.	23.	23.5	31.	27.8	23.2	22.7	156.	396.			0.06		0.02	0.02	0.91	0.39				83.
24	12	1985		3		6.	5.9	5.9	23.5	23.5	23.5	31.	27.8	23.2	22.7	144.	360.			0.3		0.02	0.02	0.18	0.02				
24	12	1985		4		4.2	4.1	4.1	23.5	23.5	23.5	31.	27.8	23.2	22.7	224.	440.			0.04		0.01	0.01	0.91	0.3				
24	12	1985		5		4.2	4.2	4.2	24.	24.	24.	31.	27.8	23.2	22.7	156.	316.			0.06	0.06	0.23	0.29	0.18	0.01				
24	12	1985		7		5.	5.	5.	22.5	22.5	22.5	31.	27.8	23.2	22.7	248.	532.			0.04		0.01	0.01	0.09	0.04				
24	12	1985		8		4.	3.9	3.9	21.2	21.2	212.	31.	27.8	23.2	22.7	192.	712.			0.04		0.01	0.01	0.99	0.39				
24	12	1985		9		4.4	4.4	4.4	23.5	23.5	23.5	31.	27.8	23.2	22.7	112.	392.			0.03		0.01	0.01	0.06	0.02				
25	12	1985		2																					16.			
25	12	1985		3																					22.			202.
25	12	1985		4																					17.			155.
25	12	1985		5																					21.			251.
25	12	1985		7																					31.			128.
25	12	1985		8																					16.			224.
25	12	1985		9																					25.			176.
29	12	1985		12																					16.			238.

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
14	2	1985	530	12	7.9	7.8	6.8	27.5	27.5	27.5	8.5
14	2	1985	530	2	7.6	7.6	7.5	27.5	27.5	28.	8.5
14	2	1985	530	3	4.4	4.5	4.5	27.5	27.5	27.5	7.6
14	2	1985	530	4	5.	5.3	5.	27.	27.5	27.5	8.4
14	2	1985	530	5	4.1	4.	3.7	27.5	28.	28.	7.8
14	2	1985	530	7	4.7	4.9	5.	27.5	27.5	27.5	7.6
14	2	1985	530	8	7.	6.8	7.1	27.5	27.5	27.5	8.5
14	2	1985	530	9	4.2	4.2	3.9	27.5	27.5	27.5	7.6
14	2	1985	930	12	9.2	8.1	6.2	28.	28.	27.8	8.7
14	2	1985	930	2	9.5	8.4	6.7	28.	28.	27.8	8.6
14	2	1985	930	3	5.1	4.8	4.5	28.	28.	27.8	7.6
14	2	1985	930	4	7.1	6.1	4.4	28.	28.	28.	8.8
14	2	1985	930	5	5.	4.7	4.1	28.	28.	28.	7.8
14	2	1985	930	7	5.3	4.9	4.1	27.5	27.5	27.2	7.9
14	2	1985	930	8	8.4	6.6	5.3	27.5	27.5	27.3	8.9
14	2	1985	930	9	4.9	4.7	4.3	28.	28.	28.	7.9
14	2	1985	1400	12	17.	17.4	11.	30.	30.	28.5	9.1
14	2	1985	1400	2	15.8	16.1	9.1	30.	29.5	28.	8.8
14	2	1985	1400	3	8.7	8.6	6.8	30.5	29.5	29.	8.1
14	2	1985	1400	4	16.8	11.	4.8	30.	29.5	28.	8.9
14	2	1985	1400	5	7.4	7.2	6.6	30.	30.	29.5	8.
14	2	1985	1400	7	8.3	8.2	6.2	29.5	29.	27.5	8.2
14	2	1985	1400	8	16.4	15.8	8.8	29.5	28.5	27.5	9.1
14	2	1985	1400	9	7.7	7.6	7.	29.5	29.5	28.5	8.1
14	2	1985	1900	12	16.4	16.	12.6	30.	30.	30.	8.5
14	2	1985	1900	2	16.	15.	11.2	29.	29.	29.	8.7
14	2	1985	1900	3	8.7	8.5	6.6	30.	30.	30.	7.8
14	2	1985	1900	4	15.	14.2	8.	29.	29.	29.	8.6
14	2	1985	1900	5	7.9	7.8	7.7	29.	29.	29.	7.5
14	2	1985	1900	7	8.6	8.4	7.3	29.5	29.5	29.5	7.6
14	2	1985	1900	8	16.	15.6	8.	29.	29.	29.	8.7
14	2	1985	1900	9	7.9	7.7	7.1	30.	30.	30.	7.4
15	2	1985	400	12	7.6	7.5	7.5	28.	28.	28.	7.8
15	2	1985	400	2	6.2	6.2	6.2	27.	27.	27.	7.8
15	2	1985	400	3	4.9	4.9	4.9	28.	28.	28.	7.2
15	2	1985	400	4	4.6	4.5	4.5	27.5	27.5	27.5	7.8
15	2	1985	400	5	4.2	4.1	4.1	28.	28.	28.	7.
15	2	1985	400	7	4.8	4.7	4.7	27.8	27.8	27.8	7.1
15	2	1985	400	8	6.	5.9	5.9	27.5	27.5	27.5	7.9
15	2	1985	400	9	4.5	4.5	4.5	28.	28.	28.	7.1
15	2	1985	2400	12	11.	10.8	10.6	29.2	29.2	29.2	8.2
15	2	1985	2400	2	9.9	9.8	9.8	29.	29.	29.	8.
15	2	1985	2400	3	6.2	6.1	5.1	29.	29.	29.	7.3
15	2	1985	2400	4	9.3	9.2	9.2	29.2	29.2	29.	8.

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	2	1985	2400	5	5.4	5.4	5.4	29.	29.	29.	7.4
15	2	1985	2400	7	6.7	6.4	5.2	29.	29.	29.	7.5
15	2	1985	2400	8	9.7	9.4	8.	29.	29.	29.	8.
15	2	1985	2400	9	5.7	5.7	5.6	29.5	29.5	29.5	7.2
14	3	1985	530	12	5.3	5.	4.5	27.	27.	27.	8.4
14	3	1985	530	2	5.4	5.4	5.4	28.9	28.9	28.9	8.3
14	3	1985	530	3	5.1	5.	4.9	29.	29.	29.	7.9
14	3	1985	530	4	5.6	5.6	5.5	28.5	28.5	28.5	8.2
14	3	1985	530	5	4.7	4.7	4.7	29.	29.	29.	7.6
14	3	1985	530	7	4.1	4.1	4.1	28.	28.	28.	7.6
14	3	1985	530	8	6.1	6.	6.	28.	28.	28.5	8.5
14	3	1985	530	9	3.9	3.8	3.7	27.	27.	27.	7.6
14	3	1985	930	12	7.8	7.1	5.8	28.5	28.5	28.5	9.
14	3	1985	930	2	7.4	6.3	4.9	28.5	28.5	28.3	8.6
14	3	1985	930	3	6.5	6.4	6.3	29.2	29.2	29.2	8.2
14	3	1985	930	4	8.4	6.7	5.4	29.	29.	28.5	8.8
14	3	1985	930	5	5.5	5.2	5.1	29.	29.	29.	8.
14	3	1985	930	7	5.	4.7	4.	28.9	28.9	28.5	8.
14	3	1985	930	8	10.	7.7	6.6	28.	28.	28.	8.9
14	3	1985	930	9	4.9	4.7	4.7	29.	29.	29.	7.9
14	3	1985	1400	12	14.8	13.8	12.5	32.	31.	30.	9.5
14	3	1985	1400	2	13.	14.	11.8	31.	30.5	29.5	8.9
14	3	1985	1400	3	11.2	11.2	11.2	33.	32.5	32.	8.6
14	3	1985	1400	4	14.6	12.2	8.4	32.	31.	29.5	9.2
14	3	1985	1400	5	8.4	8.9	8.5	31.	30.5	29.8	8.3
14	3	1985	1400	7	8.	7.9	6.1	32.	31.	29.5	8.5
14	3	1985	1400	8	18.4	15.	8.2	31.5	31.	29.5	9.5
14	3	1985	1400	9	8.5	8.9	8.8	32.8	32.	31.5	8.4
14	3	1985	1900	12	12.4	12.2	12.	29.	29.	29.	8.6
14	3	1985	1900	2	10.8	10.2	9.8	28.	28.	28.	8.4
14	3	1985	1900	3	9.6	9.5	9.2	29.	29.	29.	8.4
14	3	1985	1900	4	12.8	12.	6.6	28.	28.	28.	8.7
14	3	1985	1900	5	7.8	7.6	7.5	29.9	29.9	29.9	7.6
14	3	1985	1900	7	7.5	7.3	6.4	30.	30.	30.	8.2
14	3	1985	1900	8	14.6	14.	7.	27.5	27.5	27.5	9.2
14	3	1985	1900	9	8.2	8.1	8.	30.	30.	30.	7.8
15	3	1985	400	12	3.6	3.6	3.6	28.2	28.2	28.2	8.
15	3	1985	400	2	3.6	3.6	3.6	29.1	29.1	29.1	7.8
15	3	1985	400	3	5.1	5.	5.	28.5	28.5	28.5	7.6
15	3	1985	400	4	4.9	4.9	4.7	29.	29.	29.	8.
15	3	1985	400	5	4.5	4.5	4.5	30.	30.	30.	7.5
15	3	1985	400	7	4.4	4.4	4.4	28.9	28.9	28.9	7.6
15	3	1985	400	8	5.5	5.5	5.5	28.5	28.5	28.5	8.2
15	3	1985	400	9	4.6	4.5	4.5	29.	29.	29.	7.3
15	3	1985	2400	12	6.4	6.4	5.7	29.	29.	29.	8.2

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	3	1985	2400	2	5.9	5.8	5.7	30.	30.	30.	8.
15	3	1985	2400	3	6.4	6.3	6.2	30.	30.	30.	7.8
15	3	1985	2400	4	7.2	7.2	7.1	29.7	29.7	29.7	7.8
15	3	1985	2400	5	5.4	5.4	5.4	30.	30.	30.	7.6
15	3	1985	2400	7	5.2	5.2	5.1	29.1	29.1	29.1	7.6
15	3	1985	2400	8	7.6	7.5	7.5	29.	29.	29.	8.2
15	3	1985	2400	9	5.5	5.5	5.3	29.5	29.5	29.5	7.4
17	4	1985	530	12	4.6	4.6	4.6	27.	27.	27.	8.8
17	4	1985	530	2	2.5	2.5	2.5	26.	26.	26.	7.8
17	4	1985	530	3	5.8	5.6	5.4	27.	27.	27.	8.5
17	4	1985	530	4	2.	2.	2.1	28.	28.	28.	8.4
17	4	1985	530	5	5.3	5.2	5.2	27.	27.	27.	8.4
17	4	1985	530	7	6.5	6.4	6.2	28.	28.	28.	8.7
17	4	1985	530	8	2.4	2.4	2.4	27.	27.	27.	8.8
17	4	1985	530	9	6.9	6.8	6.7	27.5	27.5	27.5	8.6
17	4	1985	930	12	8.1	6.6	3.7	29.	28.	28.	9.
17	4	1985	930	2	6.6	5.3	4.3	29.	28.5	28.	8.5
17	4	1985	930	3	7.3	6.5	6.2	29.	28.5	28.	8.8
17	4	1985	930	4	6.2	3.	2.5	29.	28.	28.	8.9
17	4	1985	930	5	8.8	6.7	5.7	29.	28.5	28.	8.8
17	4	1985	930	7	10.1	8.7	7.5	29.	28.	28.	8.9
17	4	1985	930	8	6.4	2.9	2.5	29.	28.	28.	8.8
17	4	1985	930	9	10.3	9.2	6.7	29.	28.5	28.	8.9
17	4	1985	1400	12	7.1	7.2	7.5	28.	28.	29.	8.6
17	4	1985	1400	2	6.8	6.9	6.9	28.5	29.	28.5	7.3
17	4	1985	1400	3	7.3	7.4	7.4	28.	28.5	28.5	8.4
17	4	1985	1400	4	6.8	6.9	7.2	28.	28.	28.	7.8
17	4	1985	1400	5	7.7	7.7	7.6	28.	28.	28.	8.
17	4	1985	1400	7	8.3	8.3	8.4	28.	28.	28.	7.3
17	4	1985	1400	8	6.6	6.8	7.	28.	28.	28.	8.1
17	4	1985	1400	9	8.5	8.6	8.6	28.	28.	28.	7.
17	4	1985	1900	12	5.6	5.7	5.8	27.	27.	27.	8.2
17	4	1985	1900	2	4.9	5.	5.1	27.	27.	27.	8.
17	4	1985	1900	3	5.9	5.9	6.	27.	27.	27.	8.1
17	4	1985	1900	4	5.5	5.9	5.9	27.	27.	27.	8.1
17	4	1985	1900	5	6.3	6.4	6.5	27.	27.	27.	8.3
17	4	1985	1900	7	6.7	6.8	7.	26.5	26.5	26.5	7.7
17	4	1985	1900	8	4.9	5.	5.2	27.	27.	27.	7.8
17	4	1985	1900	9	7.	7.2	7.3	27.	27.	27.	7.6
18	4	1985	400	12	1.8	1.7	1.7	26.	26.	26.	8.4
18	4	1985	400	2	1.4	1.5	1.7	26.	26.	26.	7.3
18	4	1985	400	3	3.2	3.2	3.3	26.	26.	26.	7.8
18	4	1985	400	4	2.1	3.4	3.5	26.	26.	26.	7.8
18	4	1985	400	5	2.8	2.8	2.8	26.5	26.5	26.5	7.6
18	4	1985	400	7	4.2	4.3	4.4	26.	26.	26.	7.8

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
18	4	1985	400	8	1.3	1.3	1.3	26.	26.	26.	7.9
18	4	1985	400	9	3.5	3.6	3.6	26.5	26.5	26.5	7.5
18	4	1985	2400	12	3.	3.1	3.3	26.5	26.5	26.5	8.2
18	4	1985	2400	2	2.6	2.6	2.7	26.5	26.5	26.5	8.5
18	4	1985	2400	3	4.1	4.2	4.2	26.5	26.5	26.5	8.3
18	4	1985	2400	4	3.3	3.4	3.7	26.	26.	26.	7.1
18	4	1985	2400	5	4.1	4.3	4.3	26.5	26.5	26.5	7.9
18	4	1985	2400	7	4.9	5.	5.	26.	26.	26.	7.9
18	4	1985	2400	8	2.9	2.8	2.7	26.	26.	26.	8.1
18	4	1985	2400	9	4.8	4.9	5.	26.5	26.5	26.5	7.8
14	5	1985	530	12	2.4	2.6	2.8	27.5	28.	28.	8.6
14	5	1985	530	2	3.4	3.5	3.6	27.	27.	27.	8.6
14	5	1985	530	3	3.3	3.3	3.1	27.5	27.5	27.5	8.7
14	5	1985	530	4	3.4	3.3	3.1	27.	27.5	27.5	8.6
14	5	1985	530	5	3.5	3.6	3.6	28.	28.	28.	8.9
14	5	1985	530	7	2.6	2.6	2.6	27.5	27.5	27.5	8.7
14	5	1985	530	8	1.4	1.5	1.8	27.5	27.5	27.5	8.6
14	5	1985	530	9	3.9	4.	4.2	27.5	27.5	27.8	8.4
14	5	1985	930	12	8.4	4.8	3.5	28.	27.5	27.	8.7
14	5	1985	930	2	7.3	4.7	3.7	28.	27.5	27.	8.8
14	5	1985	930	3	7.1	5.4	4.4	27.5	27.	27.	8.9
14	5	1985	930	4	5.6	5.1	3.6	28.	28.	27.5	8.7
14	5	1985	930	5	8.8	6.	4.9	27.5	27.5	27.5	8.9
14	5	1985	930	7	8.2	4.6	3.8	27.5	27.	27.	8.8
14	5	1985	930	8	6.8	4.	2.5	27.5	27.	27.	8.7
14	5	1985	930	9	6.2	5.6	5.	27.5	27.	27.	8.4
14	5	1985	1400	12	20.	15.1	5.1	31.	29.5	28.	9.6
14	5	1985	1400	2	18.	18.2	9.6	31.	30.	29.5	9.3
14	5	1985	1400	3	13.9	10.	9.2	31.	29.	29.	9.5
14	5	1985	1400	4	13.3	12.9	12.5	31.	30.	29.5	9.3
14	5	1985	1400	5	20.	16.	13.	31.5	31.5	29.5	9.6
14	5	1985	1400	7	19.	11.	9.6	31.	31.	31.	9.8
14	5	1985	1400	8	20.	12.	9.	30.5	29.	28.	9.6
14	5	1985	1400	9	13.2	13.	12.	31.	31.	31.	9.2
14	5	1985	1900	12	17.8	17.	16.	31.	31.	31.	8.6
14	5	1985	1900	2	15.	13.4	13.2	31.	31.	31.	9.
14	5	1985	1900	3	10.	9.8	9.5	31.	31.	31.	9.
14	5	1985	1900	4	13.3	13.2	13.2	31.	31.	31.	8.7
14	5	1985	1900	5	17.	16.2	14.2	31.	31.	31.	9.
14	5	1985	1900	7	14.	12.	10.6	31.	31.	31.	9.2
14	5	1985	1900	8	16.4	15.8	14.2	31.	31.	31.	9.1
14	5	1985	1900	9	12.	11.3	11.2	31.	31.	31.	8.3
15	5	1985	400	12	6.7	7.	7.2	26.	26.	26.	8.
15	5	1985	400	2	5.9	6.	6.1	26.	26.	26.	7.5
15	5	1985	400	3	4.9	5.	5.1	26.	26.	26.	7.7

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	5	1985	400	4	5.8	5.9	5.9	26.	26.	26.	7.6
15	5	1985	400	5	8.3	8.4	8.6	26.	26.	26.	7.9
15	5	1985	400	7	5.	5.2	5.2	26.	26.	26.	8.1
15	5	1985	400	8	4.8	4.9	5.	26.	26.	26.	7.8
15	5	1985	400	9	7.1	7.2	7.4	26.	26.	26.	7.6
15	5	1985	2400	12	9.5	9.5	9.8	29.	29.	29.	7.9
15	5	1985	2400	2	9.9	10.	10.2	29.	29.	29.	8.6
15	5	1985	2400	3	5.7	5.8	6.1	29.	29.	29.	8.3
15	5	1985	2400	4	8.8	9.	9.1	29.	29.	29.	8.1
15	5	1985	2400	5	10.6	10.8	11.	29.	29.	29.	8.3
15	5	1985	2400	7	9.6	9.6	9.7	29.	29.	29.	8.4
15	5	1985	2400	8	9.2	9.4	9.5	29.	29.	29.	8.
15	5	1985	2400	9	8.6	8.7	9.1	29.5	29.5	29.5	7.7
13	6	1985	530	12	0.9	1.	1.1	26.	26.	26.	8.9
13	6	1985	530	2	4.3	4.3	4.2	26.5	26.5	26.5	8.8
13	6	1985	530	3	4.	4.	4.1	26.	26.	26.	9.
13	6	1985	530	4	7.6	7.7	7.7	26.	26.	26.	9.6
13	6	1985	530	5	5.3	5.4	5.3	26.	26.	26.	9.5
13	6	1985	530	7	4.6	4.6	4.6	26.	26.	26.	8.5
13	6	1985	530	8	1.5	1.5	1.6	26.	26.	26.	8.4
13	6	1985	530	9	2.2	2.3	2.5	26.	26.	26.	8.9
13	6	1985	930	12	4.9	4.7	4.4	27.5	27.5	27.5	8.7
13	6	1985	930	2	6.3	5.2	4.6	27.5	27.5	27.5	8.6
13	6	1985	930	3	5.9	6.	6.	27.5	27.5	27.5	8.5
13	6	1985	930	4	10.4	9.3	7.5	27.	27.	27.	9.3
13	6	1985	930	5	7.3	7.3	7.3	27.5	27.5	27.5	9.
13	6	1985	930	7	6.7	6.4	4.7	27.5	27.5	27.5	8.5
13	6	1985	930	8	4.5	3.9	3.7	27.5	27.5	27.5	8.3
13	6	1985	930	9	3.1	3.2	3.4	27.5	27.5	27.5	8.6
13	6	1985	1400	12	14.4	11.2	7.3	29.	28.5	28.5	9.2
13	6	1985	1400	2	15.6	12.3	11.	29.	29.	29.	8.7
13	6	1985	1400	3	10.8	10.6	10.4	29.	28.5	28.	9.1
13	6	1985	1400	4	18.2	14.2	11.7	29.	28.	28.	9.8
13	6	1985	1400	5	12.8	12.4	12.2	29.	29.	29.	9.4
13	6	1985	1400	7	11.6	11.	10.6	29.	28.5	28.5	8.5
13	6	1985	1400	8	16.	8.1	7.	29.	28.5	28.5	8.6
13	6	1985	1400	9	6.4	5.4	5.	29.	29.	29.	8.6
13	6	1985	1900	12	10.5	10.5	10.5	28.5	28.5	28.5	8.8
13	6	1985	1900	2	11.8	11.9	12.	28.5	28.5	28.5	8.2
13	6	1985	1900	3	9.	9.	9.1	28.8	28.8	28.8	7.9
13	6	1985	1900	4	13.4	13.4	13.6	28.	28.	28.	8.3
13	6	1985	1900	5	10.9	10.9	11.	28.8	28.8	28.8	8.5
13	6	1985	1900	7	9.6	9.6	9.5	28.	28.	28.	8.
13	6	1985	1900	8	10.	10.	10.	28.3	28.3	28.3	7.8
13	6	1985	1900	9	4.9	4.9	5.	28.5	28.5	28.5	8.3

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
14	6	1985	400	12	2.8	2.9	3.	27.5	27.	27.	8.5
14	6	1985	400	2	5.8	5.9	6.1	27.2	27.2	27.2	8.3
14	6	1985	400	3	4.8	4.8	4.9	27.	27.	27.	8.4
14	6	1985	400	4	8.1	8.2	8.4	27.	27.	27.	9.1
14	6	1985	400	5	5.7	5.8	6.	27.2	27.2	27.2	8.7
14	6	1985	400	7	4.5	4.6	4.7	27.	27.	27.	8.2
14	6	1985	400	8	2.2	2.3	2.4	27.5	27.5	27.5	8.2
14	6	1985	400	9	2.3	2.3	2.3	27.5	27.5	27.5	8.3
14	6	1985	2400	12	6.1	6.1	6.1	27.5	27.5	27.5	8.9
14	6	1985	2400	2	8.7	8.7	8.6	27.8	27.8	27.8	8.6
14	6	1985	2400	3	7.	7.1	7.1	28.	28.	28.	8.5
14	6	1985	2400	4	11.6	11.6	11.8	27.5	27.5	27.5	9.3
14	6	1985	2400	5	8.4	8.4	8.5	28.	28.	28.	9.2
14	6	1985	2400	7	7.	7.	7.1	27.5	27.5	27.5	8.5
14	6	1985	2400	8	5.8	5.9	5.9	27.7	27.7	27.7	8.4
14	6	1985	2400	9	3.7	3.7	4.	27.8	27.8	27.8	8.5

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	8		400	12	6.4	6.3	6.3	30.	30.	30.	8.8
15	8		400	2	7.2	7.	7.	30.	30.	30.	8.3
15	8		400	3	5.1	5.1	5.1	30.	30.	30.	7.9
15	8		400	4	7.4	7.3	7.1	31.	32.	32.	8.9
15	8		400	5	1.4	1.4	1.4	29.5	29.5	29.5	8.4
15	8		400	7	5.4	5.4	5.3	29.5	29.5	29.5	8.5
15	8		400	8	4.8	4.7	4.7	30.	30.	30.	8.6
15	8		400	9	4.8	4.7	4.7	29.5	29.5	29.5	8.7
15	8		530	12	6.9	7.	7.2	30.	30.	30.	8.
15	8		530	2	6.5	6.8	7.	29.	29.	29.	8.1
15	8		530	3	5.7	5.8	6.	29.5	29.5	29.5	7.4
15	8		530	4	7.	7.3	7.7	28.5	28.5	29.	8.3
15	8		530	5	2.7	3.	3.2	28.5	28.5	28.5	8.
15	8		530	7	6.5	6.8	6.	28.5	28.5	28.5	8.1
15	8		530	8	5.3	5.4	5.5	29.	29.	30.	8.
15	8		530	9	6.5	6.7	6.8	30.	30.	30.	8.2
15	8		930	12	10.4	8.	6.2	32.	32.	31.5	8.5
15	8		930	2	9.5	7.	6.	31.5	31.5	30.	8.5
15	8		930	3	6.7	6.5	5.8	32.	31.5	31.5	7.8
15	8		930	4	7.2	6.8	6.4	34.5	31.	31.	8.7
15	8		930	5	9.5	4.	2.2	31.5	31.5	31.	8.8
15	8		930	7	11.4	7.	4.9	31.5	31.5	31.	8.5
15	8		930	8	8.7	5.8	5.	31.5	31.5	31.	8.3
15	8		930	9	12.	7.	5.5	31.5	31.	31.	8.8
15	8		1400	12	16.2	18.	10.6	36.	34.	33.	8.9
15	8		1400	2	18.4	18.4	13.	35.	34.	33.	9.
15	8		1400	3	10.1	9.9	9.8	35.5	34.5	33.	8.4
15	8		1400	4	17.2	17.2	9.2	36.	35.	33.	9.2
15	8		1400	5	20.	12.6	4.	35.	33.	31.5	9.5
15	8		1400	7	18.8	18.	6.1	35.	33.	32.	9.2
15	8		1400	8	16.2	15.	8.	35.	34.	32.	8.9
15	8		1400	9	20.	11.2	6.	36.	35.	32.	9.6
15	8		1900	12	13.5	12.7	9.	34.	33.	33.	9.3
15	8		1900	2	14.7	13.7	13.5	33.5	33.5	33.5	8.9
15	8		1900	3	8.2	8.1	6.9	34.	34.	33.	8.5
15	8		1900	4	13.1	12.1	10.5	34.	33.8	33.	9.3
15	8		1900	5	12.	11.3	3.	33.	33.	32.	9.3
15	8		1900	7	13.7	12.7	5.	33.5	33.5	32.	9.3
15	8		1900	8	12.3	11.7	9.9	33.5	33.5	33.5	9.2
15	8		1900	9	16.5	12.3	3.7	34.	33.5	32.	9.8
15	8		2400	12	8.9	8.8	8.6	31.	31.	31.	8.8
15	8		2400	2	9.5	9.3	9.3	31.	31.	31.	8.6
15	8		2400	3	5.9	5.7	5.7	31.	31.	31.	8.2
15	8		2400	4	8.6	8.5	7.9	30.	30.5	30.5	8.9

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	8		2400	5	5.2	5.2	4.5	30.	30.	30.	8.8
15	8		2400	7	9.1	8.5	5.8	30.	30.	30.	9.
15	8		2400	8	7.1	7.	7.	30.5	30.5	30.5	8.5
15	8		2400	9	11.1	11.	4.	30.5	30.5	30.	9.1
17	9		400	12	5.5	5.5	5.5	27.5	27.5	27.5	8.4
17	9		400	2	4.7	4.7	4.7	27.5	27.5	27.5	8.
17	9		400	3	3.8	3.9	3.9	27.5	27.5	27.5	7.6
17	9		400	4	4.9	5.	5.1	27.	27.	27.	8.3
17	9		400	5	4.	4.1	4.2	27.	27.	27.	8.
17	9		400	7	4.7	4.7	5.	27.	27.	27.	7.7
17	9		400	8	5.8	5.8	6.	27.	27.	27.	8.2
17	9		400	9	5.2	5.3	5.3	28.	28.	28.	8.
17	9		530	12	7.1	6.9	6.9	27.5	27.5	27.5	8.2
17	9		530	2	7.	6.6	6.5	27.5	27.5	27.5	7.6
17	9		530	3	7.3	7.1	7.	27.5	27.5	27.5	7.6
17	9		530	4	6.3	6.3	6.3	27.5	27.5	27.5	7.8
17	9		530	5	6.	5.8	5.8	27.5	27.5	27.5	7.7
17	9		530	7	7.3	7.3	7.8	27.5	27.5	27.5	7.3
17	9		530	8	8.2	7.5	7.5	28.	28.	28.	7.9
17	9		530	9	7.9	7.9	7.9	28.	28.	28.	7.7
17	9		930	12	8.5	5.6	4.4	29.	28.	28.	8.7
17	9		930	2	7.2	4.5	3.4	29.	28.	28.	8.2
17	9		930	3	6.7	5.7	4.6	29.	28.	28.	8.3
17	9		930	4	4.	5.	4.2	29.	28.	28.	8.5
17	9		930	5	7.4	5.4	4.2	29.	28.	28.	8.7
17	9		930	7	7.1	5.6	5.2	29.	28.	28.	8.1
17	9		930	8	8.	6.	4.7	29.	28.5	28.	8.4
17	9		930	9	7.9	6.4	6.	29.	28.5	28.	8.5
17	9		1400	12	20.	11.2	5.1	31.5	29.	28.5	9.1
17	9		1400	2	15.8	11.2	5.3	31.	30.	28.5	8.8
17	9		1400	3	0.	8.8	5.2	31.	30.	28.5	8.4
17	9		1400	4	18.4	9.8	4.6	31.	29.	28.	9.
17	9		1400	5	5.2	10.6	5.9	31.	29.5	28.	9.
17	9		1400	7	14.4	9.8	7.5	31.	29.	29.	8.9
17	9		1400	8	18.4	11.8	7.1	31.	28.5	28.5	9.1
17	9		1400	9	14.2	12.6	6.7	31.	30.	28.5	9.
17	9		1900	12	12.	11.	9.5	29.5	29.5	29.5	8.9
17	9		1900	2	9.	8.	6.8	29.	29.	29.	8.3
17	9		1900	3	7.	6.7	6.1	29.	29.2	29.	7.9
17	9		1900	4	12.2	8.4	4.2	28.	28.	28.	8.7
17	9		1900	5	8.8	8.6	8.3	29.	29.	29.	8.9
17	9		1900	7	9.9	9.5	9.3	29.	29.	29.5	8.8
17	9		1900	8	11.2	11.2	11.2	29.5	29.5	29.5	9.
17	9		1900	9	9.7	9.6	9.3	29.5	29.5	29.5	8.7
17	9		2400	12	7.7	7.7	7.7	28.	28.	28.	8.5

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
17	9		2400	2	6.2	6.1	5.8	28.	28.	28.	8.1
17	9		2400	3	5.	5.	5.1	28.	28.	28.	7.8
17	9		2400	4	7.3	7.3	7.4	27.5	27.5	27.5	8.4
17	9		2400	5	6.2	6.2	6.2	28.	28.	28.	8.3
17	9		2400	7	6.2	6.2	6.3	28.	28.	28.	7.8
17	9		2400	8	7.8	7.9	7.9	27.5	27.5	27.5	8.2
17	9		2400	9	6.7	6.7	6.8	28.	28.	28.	8.
15	10		400	12	7.9	7.8	7.7	28.	28.	28.	8.7
15	10		400	2	6.2	6.2	6.	28.	28.	28.	8.3
15	10		400	3	9.	8.9	8.8	28.5	28.5	28.5	8.4
15	10		400	4	5.2	5.2	5.2	28.	28.	28.	8.3
15	10		400	5	7.2	7.2	7.1	28.5	28.5	28.5	7.8
15	10		400	7	8.9	8.9	8.7	28.	28.	28.	8.5
15	10		400	8	9.6	9.6	8.8	28.	28.	28.	8.
15	10		400	9	8.7	8.6	8.6	28.5	28.5	28.5	8.1
15	10		530	12	2.7	2.8	2.8	27.	27.	27.	8.5
15	10		530	2	3.	3.	3.1	27.	27.	27.	8.
15	10		530	3	4.	4.1	4.1	27.	27.	27.	7.8
15	10		530	4	2.7	2.6	2.7	27.	27.	27.	8.3
15	10		530	5	3.	3.	3.1	27.	27.	27.	7.4
15	10		530	7	4.2	4.3	4.4	27.	27.	27.	7.8
15	10		530	8	4.	4.1	4.2	27.	27.	27.	8.2
15	10		530	9	4.5	4.5	4.6	27.	27.	27.	7.7
15	10		930	12	8.6	4.8	3.	28.5	28.5	28.	9.
15	10		930	2	7.1	3.7	2.3	28.9	28.5	28.	8.4
15	10		930	3	10.2	9.	6.2	29.	28.5	28.	8.5
15	10		930	4	2.8	2.8	2.8	28.2	28.	27.8	8.5
15	10		930	5	7.7	6.	4.5	29.	29.	28.	8.1
15	10		930	7	8.	7.8	7.1	29.	28.5	28.	8.5
15	10		930	8	9.4	6.	6.4	29.	28.5	28.	8.7
15	10		930	9	8.	7.4	6.7	29.	28.5	28.	8.3
15	10		1400	12	20.	15.	6.5	33.	30.	28.5	9.5
15	10		1400	2	16.	12.	4.	33.	30.	28.9	9.
15	10		1400	3	14.5	16.	12.8	33.	31.	29.	9.
15	10		1400	4	12.	10.6	6.2	33.5	30.5	28.5	8.9
15	10		1400	5	14.8	11.4	10.2	32.	31.	29.5	8.9
15	10		1400	7	12.9	13.3	12.3	32.	31.	28.5	8.7
15	10		1400	8	20.	13.9	6.2	32.	29.	28.5	9.1
15	10		1400	9	12.6	13.4	12.	33.	31.	29.5	8.7
15	10		1900	12	18.2	14.8	7.8	28.	29.5	30.5	9.5
15	10		1900	2	13.2	11.5	8.	31.	30.	28.	8.9
15	10		1900	3	13.7	12.4	11.6	30.5	29.		9.
15	10		1900	4	11.5	10.	5.8	30.5	30.	28.	8.9
15	10		1900	5	12.2	11.	10.	30.	30.	29.5	8.7
15	10		1900	7	14.2	13.6	12.8	29.5	29.5	29.	8.8

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
15	10		1900	8	17.4	15.2	12.	30.5	30.	28.5	9.
15	10		1900	9	13.	12.2	11.	30.	30.	29.	8.5
15	10		2400	12	12.8	12.2	7.5	29.	29.	28.	9.
15	10		2400	2	10.6	9.8	5.1	29.	29.	28.5	8.6
15	10		2400	3	11.6	11.2	9.6	29.5	29.5	29.5	8.7
15	10		2400	4	8.1	7.8	6.2	29.	29.	29.	8.9
15	10		2400	5	9.8	9.6	9.5	29.	29.	29.	8.6
15	10		2400	7	10.8	10.6	10.2	29.	29.	29.	8.7
15	10		2400	8	12.8	12.5	10.8	29.	29.	28.5	9.
15	10		2400	9	10.7	10.6	10.5	29.	29.	29.	8.3
13	11		400	12	3.	3.	3.	27.5	27.5	27.5	8.7
13	11		400	2	4.6	4.6	4.6	28.	28.	28.	8.2
13	11		400	3	0.4	0.4	0.4	27.9	27.9	27.9	7.8
13	11		400	4	5.5	5.5	5.2	27.9	27.9	27.9	8.5
13	11		400	5	3.8	3.8	3.8	28.	28.	28.	7.8
13	11		400	7	4.	4.	4.	27.5	27.8	27.8	8.
13	11		400	8	4.6	4.6	4.6	27.4	27.4	27.4	8.4
13	11		400	9	3.7	3.7	3.7	28.	28.	28.	7.9
13	11		530	12	4.2	4.2	4.2	29.	29.	29.	7.7
13	11		530	2	5.3	5.3	5.3	29.	29.	29.	8.2
13	11		530	3	4.7	4.7	4.7	29.2	29.2	29.2	7.9
13	11		530	4	4.4	4.4	4.4	29.	29.	29.	8.3
13	11		530	5	4.2	4.2	4.2	29.5	29.5	29.5	7.8
13	11		530	7	4.9	4.9	4.9	29.	29.	29.	8.
13	11		530	8	4.7	4.7	4.7	29.	29.	29.	8.4
13	11		530	9	4.6	4.6	4.7	29.5	29.5	29.5	8.
13	11		930	12	11.7	4.4	3.	29.	29.	29.	9.
13	11		930	2	7.8	6.	3.7	29.8	29.5	29.5	8.6
13	11		930	3	8.3	6.6	6.	31.	31.	31.	8.5
13	11		930	4	10.4	8.	4.5	29.5	29.2	29.	8.7
13	11		930	5	6.7	6.3	4.6	29.9	29.5	29.	8.3
13	11		930	7	8.6	7.8	5.7	29.	29.	29.	8.5
13	11		930	8	11.	5.5	4.1	29.	29.	29.	8.7
13	11		930	9	7.8	7.	5.3	29.9	29.5	29.	8.5
13	11		1400	12	19.8	9.	6.2	31.	31.	30.	9.6
13	11		1400	2	14.	12.2	6.5	31.	31.	30.	8.8
13	11		1400	3	12.2	9.8	8.7	31.	31.	31.	8.8
13	11		1400	4	16.	13.	7.5	31.	30.5	30.	9.1
13	11		1400	5	10.8	9.8	8.6	31.	31.	30.5	8.5
13	11		1400	7	12.	10.4	8.	31.	31.	31.	8.7
13	11		1400	8	15.2	12.	9.	31.	30.	29.	9.
13	11		1400	9	12.2	11.7	10.4	31.	31.	30.5	8.9
13	11		1900	12	9.	8.9	8.8	28.5	28.5	28.5	9.4
13	11		1900	2	8.9	8.8	8.7	29.	29.	29.	8.8
13	11		1900	3	8.3	8.	7.4	29.	29.	29.	8.9

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

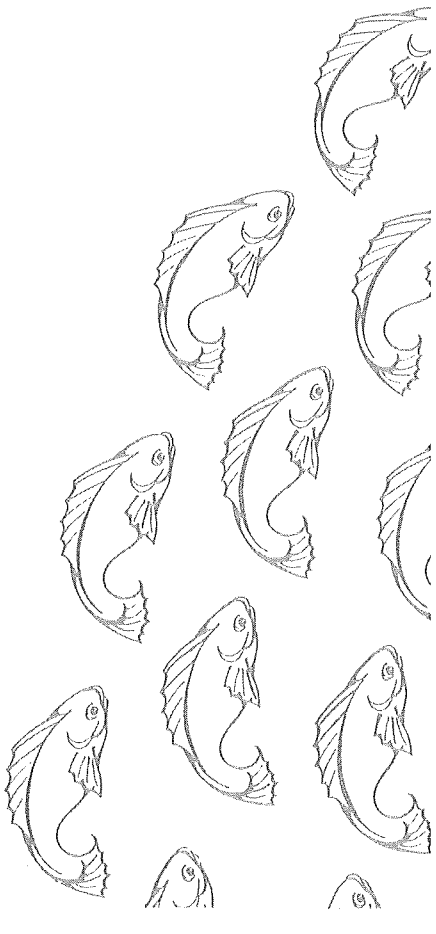
DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT	PH
13	11		1900	4	10.2	10.	9.8	28.8	28.8	28.8	9.1
13	11		1900	5	7.7	7.6	7.5	29.	29.	29.	8.8
13	11		1900	7	7.7	7.6	7.5	28.5	28.5	28.5	8.9
13	11		1900	8	8.9	8.8	8.6	28.2	28.2	28.2	9.
13	11		1900	9	8.2	8.1	7.8	29.	29.	29.	9.
13	11		2400	12	5.4	5.4	5.3	25.	25.	25.	8.8
13	11		2400	2	6.2	6.1	6.1	25.2	25.2	25.2	8.5
13	11		2400	3	5.9	5.9	5.7	25.2	25.2	25.2	8.5
13	11		2400	4	7.3	7.2	6.9	25.1	25.2	25.2	9.2
13	11		2400	5	5.5	5.4	5.4	25.2	25.6	28.5	8.5
13	11		2400	7	5.6	5.3	6.3	25.	25.	25.	8.6
13	11		2400	8	6.3	6.3	5.5	25.	25.	25.	8.7
13	11		2400	9	5.5	5.5	5.4	25.2	25.2	25.2	8.6
17	12		400	12	9.1	9.1	9.1	22.	22.	22.	
17	12		400	2	8.7	8.7	8.7	23.	23.	23.	
17	12		400	3	10.	10.	10.	23.	23.	23.	
17	12		400	4	8.2	8.2	8.2	23.	23.	23.	
17	12		400	5	9.8	9.8	9.8	23.	23.	23.	
17	12		400	7	7.7	7.7	7.7	23.5	23.5	23.5	
17	12		400	8	9.9	9.9	9.9	23.	23.	23.	
17	12		530	12	5.8	5.7	5.7	20.5	21.	21.	
17	12		530	2	5.5	4.8	5.2	20.5	21.	21.5	
17	12		530	3	6.4	6.4	6.4	20.5	21.	21.5	
17	12		530	4	4.8	4.8	4.7	21.	21.5	21.5	
17	12		530	5	5.6	5.5	5.6	21.5	21.5	21.5	
17	12		530	7	4.9	4.9	4.8	20.5	20.5	20.5	
17	12		530	8	5.5	5.5	5.5	20.	20.5	20.5	
17	12		530	9	5.7	5.6	5.6	20.5	21.	21.	
17	12		930	12	12.1	12.2	12.5	24.	23.	23.	
17	12		930	2	7.6	7.7	7.3	23.5	23.5	23.	
17	12		930	3	10.2	10.	9.4	23.2	23.8	23.8	
17	12		930	4	8.1	8.5	8.	24.	24.	23.5	
17	12		930	5	9.6	10.4	10.	24.	23.8	23.4	
17	12		930	7	8.8	8.2	7.6	23.5	23.	23.	
17	12		930	8	10.6	9.1	8.6	32.2	23.	23.	
17	12		930	9	9.7	9.8	9.8	24.	23.	23.	
17	12		1400	12	19.6	17.6	9.6	27.	23.8	22.5	
17	12		1400	2	14.2	12.2	7.4	27.	24.5	23.	
17	12		1400	3	15.	15.	12.9	26.	25.	23.8	
17	12		1400	4	16.6	15.4	6.4	27.	24.	23.	
17	12		1400	5	17.1	15.8	12.6	26.5	25.5	24.	
17	12		1400	7	15.	13.8	9.2	26.	25.	23.8	
17	12		1400	8	20.	20.	12.	26.8	25.5	23.2	
17	12		1400	9	16.2	15.8	12.8	27.	23.8	22.5	
17	12		1900	12	13.2	13.2	13.2	25.	25.	25.	

Table 4. Diurnal Measurements. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	D.O. TIME	POND#	DO-TOP	DO-MID	DO-BOT	WATER TEMP TOP	WATER TEMP MID	WATER TEMP BOT
17	12		1900	2	13.2	13.2	13.2	25.	25.	25.
17	12		1900	3	14.	14.	14.	25.	25.	25.
17	12		1900	4	15.	14.	11.8	25.	25.	25.
17	12		1900	5	13.4	13.4	13.4	25.	25.	25.
17	12		1900	7	11.8	11.8	11.8	25.	25.	25.
17	12		1900	8	17.	17.	9.2	24.	24.	24.
17	12		1900	9	13.6	13.6	13.6	25.	25.	25.
17	12		2400	12	11.2	11.2	11.2	23.	23.	23.
17	12		2400	2	10.4	10.4	10.4	24.	24.	24.
17	12		2400	3	11.8	11.8	11.8	24.	24.	24.
17	12		2400	4	9.9	9.9	9.9	24.	24.	24.
17	12		2400	5	11.8	11.8	11.8	24.	24.	24.
17	12		2400	7	9.	9.	9.	24.	24.	24.
17	12		2400	8	12.	12.	12.	23.5	23.5	23.5
17	12		2400	9	11.2	11.2	11.2	23.	23.	23.

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Ayutthaya, Thailand, Cycle II, Dry Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT
1	2	1985	#02	STK	nil	6.	210	27.	21	5.9	11.74	21		
1	2	1985	#03	STK	nil	5.7	210	26.1	21	3.9	11.9	21		
1	2	1985	#04	STK	nil	5.2	210	23.8	21	8.7	12.15	21		
1	2	1985	#05	STK	nil	5.4	210	25.3	21	7.3	12.29	21		
1	2	1985	#07	STK	nil	5.2	210	27.	21	7.3	12.14	21		
1	2	1985	#08	STK	nil	5.3	210	27.	21	7.3	11.83	21		
1	2	1985	#09	STK	nil	5.2	210	23.5	21	6.5	12.19	21		
1	2	1985	#12	STK	nil	4.6	210	24.2	21	5.1	12.19	21		
28	2	1985	#02	SAM	nil			76.9	21	8.5	16.	21	0.46	
28	2	1985	#03	SAM	nil			70.	21	7.5	14.4	21	0.69	
28	2	1985	#04	SAM	nil			71.7	21	10.7	15.3	21	0.78	
28	2	1985	#05	SAM	nil			48.2	21	7.9	14.	21	0.81	
28	2	1985	#07	SAM	nil			57.5	21	7.5	14.3	21	0.68	
28	2	1985	#08	SAM	nil			82.1	21	9.7	15.9	21	0.56	
28	2	1985	#09	SAM	nil			50.2	21	5.2	14.1	21	0.55	
28	2	1985	#12	SAM	nil			63.2	21	9.7	14.8	21	0.91	
29	3	1985	#02	SAM	nil			109.1	21	18.3	17.2	21	1.06	
29	3	1985	#03	SAM	nil			87.3	21	11.5	16.4	21	0.83	
29	3	1985	#04	SAM	nil			111.6	21	12.4	17.	21	0.81	
29	3	1985	#05	SAM	nil			79.5	21	14.2	15.8	21	0.89	
29	3	1985	#07	SAM	nil			86.	21	9.3	16.8	21	0.56	
29	3	1985	#08	SAM	nil			120.9	21	18.2	18.1	21	0.8	
29	3	1985	#09	SAM	nil			85.3	21	16.4	16.4	21	0.78	
29	3	1985	#12	SAM	nil			102.7	21	11.2	17.1	21	0.53	
30	4	1985	#02	SAM	nil			139.3	21	18.9	19.6	21	1.2	8.6
30	4	1985	#03	SAM	nil			131.2	21	17.8	19.1	21	0.66	0.6
30	4	1985	#04	SAM	nil			160.6	21	19.4	20.7	21	0.87	2.1
30	4	1985	#05	SAM	nil			133.6	21	16.1	18.7	21	0.77	9.1
30	4	1985	#07	SAM	nil			122.4	21	15.9	18.6	21	0.92	3.6
30	4	1985	#08	SAM	nil			147.4	21	19.7	20.1	21	0.68	2.3
30	4	1985	#09	SAM	nil			110.5	21	20.9	18.	21	1.1	7.2
30	4	1985	#12	SAM	nil			130.7	21	25.4	18.2	21	0.39	4.8
30	5	1985	#02	SAM	nil			163.3	21	25.1	20.3	21	0.9	1.4
30	5	1985	#03	SAM	nil			201.9	21	25.1	21.1	21	1.	1.7
30	5	1985	#04	SAM	nil			189.8	21	24.2	21.5	21	0.8	9.1
30	5	1985	#05	SAM	nil			210.8	21	21.5	21.8	21	0.6	1.6
30	5	1985	#07	SAM	nil			176.	21	23.9	20.1	21	2.3	4.9
30	5	1985	#08	SAM	nil			225.2	21	26.9	22.9	21	0.9	13.
30	5	1985	#09	SAM	nil			173.1	21	23.2	20.3	21	0.8	8.
30	5	1985	#12	SAM	nil			174.5	21	27.	20.4	21	0.9	4.6
29	6	1985	#02	HAR	nil	68.8	184	165.	21	30.7	20.9	21	1.1	28.2
29	6	1985	#03	HAR	nil	52.7	209	186.	21	33.5	21.8	21	1.3	8.3
29	6	1985	#04	HAR	nil	90.9	172	186.6	21	28.6	22.1	21	0.9	44.3
29	6	1985	#05	HAR	nil	59.5	189	241.7	21	29.	23.8	21	1.2	1.9
29	6	1985	#07	HAR	nil	61.	210	229.3	21	20.3	22.8	21	1.3	6.2
29	6	1985	#08	HAR	nil	103.7	209	236.9	21	43.	23.7	21	1.4	30.
29	6	1985	#09	HAR	nil	77.6	180	201.4	21	34.8	21.3	21	0.77	23.7
29	6	1985	#12	HAR	nil	98.7	210	201.9	21	32.8	21.9	21	1.	45.1

Table 5. Fish/Shrimp Stocking, Sampling, and Harvesting. Ayutthaya, Thailand, Cycle II, Wet Season

DAY	MONTH	YEAR	POND	ACTIVITY	SPECIES	POP. WEIGHT	POP. NUMBER	SAMPLE WEIGHT	SAMPLE WT.-#	SAMPLE WT.-SD	SAMPLE LENGTH	SAMPLE LT.-#	SAMPLE LT.-SD	REPROD. WEIGHT
3	8	1985	12	STK	nil	6.3	220	32.	22	8.8	12.2	22	1.28	
3	8	1985	2	STK	nil	6.4	220	29.	22	7.9	11.7	22	1.35	
3	8	1985	3	STK	nil	6.4	220	29.	22	8.2	11.9	22	1.11	
3	8	1985	4	STK	nil	6.4	220	33.	22	8.5	12.2	22	0.98	
3	8	1985	5	STK	nil	6.6	220	34.	22	9.2	12.3	22	1.38	
3	8	1985	7	STK	nil	6.2	220	34.	22	8.	12.1	22	1.05	
3	8	1985	8	STK	nil	6.1	220	33.	22	9.4	11.8	22	1.26	
3	8	1985	9	STK	nil	6.1	220	33.	22	7.9	12.2	22	1.11	
2	9	1985	12	SAM	nil			123.	22	18.2	17.3	22	0.99	0.2
2	9	1985	2	SAM	nil			114.	22	16.6	17.	22	0.88	1.5
2	9	1985	3	SAM	nil			94.	22	9.7	16.3	22	0.71	0.2
2	9	1985	4	SAM	nil			105.	22	18.8	16.6	22	0.91	0.6
2	9	1985	5	SAM	nil			133.	22	29.3	17.4	22	1.1	
2	9	1985	7	SAM	nil			115.	22	29.	16.6	22	1.06	1.2
2	9	1985	8	SAM	nil			109.	22	26.6	16.8	22	1.23	0.2
2	9	1985	9	SAM	nil			110.	22	23.3	16.6	22	0.88	0.4
2	10	1985	12	SAM	nil			165.	22	30.6	20.	22	0.9	3.4
2	10	1985	2	SAM	nil			121.	22	19.8	18.7	22	0.84	8.
2	10	1985	3	SAM	nil			148.	22	17.6	19.6	22	0.92	0.5
2	10	1985	4	SAM	nil			154.	22	30.6	19.3	22	1.05	3.4
2	10	1985	5	SAM	nil			202.	22	40.1	21.	22	1.34	2.2
2	10	1985	7	SAM	nil			161.	22	41.4	19.9	22	1.5	3.7
2	10	1985	8	SAM	nil			158.	22	28.8	19.9	22	1.2	8.2
2	10	1985	9	SAM	nil			146.	22	24.8	19.3	22	1.21	4.4
4	11	1985	12	SAM	nil			177.	22	30.7	21.5	22	1.6	1.5
4	11	1985	2	SAM	nil			161.	22	23.2	20.4	22	0.9	3.
4	11	1985	3	SAM	nil			179.	22	32.3	21.4	22	1.4	1.5
4	11	1985	4	SAM	nil			166.	22	26.2	20.9	22	1.3	2.
4	11	1985	5	SAM	nil			246.	22	43.	23.4	22	1.3	7.
4	11	1985	7	SAM	nil			215.	22	40.	22.3	22	1.3	13.6
4	11	1985	8	SAM	nil			159.	22	30.4	20.7	22	1.6	5.
4	11	1985	9	SAM	nil			187.	22	24.	21.7	22	0.9	3.
2	12	1985	12	SAM	nil			173.	22	26.9	21.5	22	1.2	6.8
2	12	1985	2	SAM	nil			156.	22	23.8	20.4	22	1.	5.6
2	12	1985	3	SAM	nil			231.	22	27.5	23.3	22	1.1	8.6
2	12	1985	4	SAM	nil			181.	22	31.9	21.5	22	1.3	10.4
2	12	1985	5	SAM	nil			266.	22	41.1	24.5	22	1.1	6.
2	12	1985	7	SAM	nil			247.	22	43.7	23.7	22	1.3	8.8
2	12	1985	8	SAM	nil			181.	22	24.8	21.8	22	1.	12.2
2	12	1985	9	SAM	nil			238.	22	39.5	23.6	22	1.5	7.3
27	12	1985	12	HAR	nil	28.8	198	166.	22	16.6	21.7	22	0.87	21.6
27	12	1985	2	HAR	nil	25.9	185	168.	22	25.5	20.7	22	1.2	21.
27	12	1985	3	HAR	nil	42.8	201	216.	22	31.4	23.5	22	1.1	20.8
27	12	1985	4	HAR	nil	28.7	179	178.	22	19.2	21.8	22	0.7	20.2
27	12	1985	5	HAR	nil	51.7	209	285.	22	37.2	25.	22	1.	11.8
27	12	1985	7	HAR	nil	43.1	195	252.	22	35.	24.2	22	1.	19.5
27	12	1985	8	HAR	nil	35.3	212	165.	22	27.	21.	22	1.3	20.3
27	12	1985	9	HAR	nil	43.1	199	240.	22	39.1	24.5	22	1.2	16.7