DELTA CATFISH PRODUCTION
Assumptions for 250-, 750- and 1,500-acre farms
Using Multiple-Batch Stockings

Terrill R. Hanson, Jim Steeby and Jimmy Avery
Mississippi State University Extension Service

I. Primary Catfish Production Methods in Use in the MS Delta

A. Single batch production system - not done much and not used in these enterprise budgets.
- 12 batch production system - not all ready in fall, so partial harvest (Atop off@) a couple of times before following June harvest and before then restock with fingerlings
- these methods may be practiced by 20-30% of delta catfish farmers

B. Multiple-batch production system - predominant production system in use and used here.
- stock 5" fingerlings every spring at the rate of 7-10,000/acre
- cluster around 7,500 fingerlings per acre
- fixed restocking date every spring
- maybe practiced by 75-80% of all delta catfish farmers

II. Assumptions for multiple-batch production system

A. Pond construction costs are included.

B. No off-flavor or other delays in harvesting are included, this is done in sensitivity analyses.

C. Stocking Rates

These rates will not change by farm-scale size. Fingerlings are stocked at 7,500 per acre every March or sometime between February and June each year. Fish are fed once a day.

Delta fingerling producers will be able to easily obtain 5" fingerlings. In this analysis, 5" fingerlings (30 lb/1,000 fish) stocked in March every year (fish sizes range from 3" - 7"). In a typical delivery of 5" fingerlings the size distribution may be similar to 60% of the fingerlings being in the 4-6" range, 20% may be in the 3-4" range, and 20% may be in the 6-7" range, giving a median size of 5". For this analysis, a narrower fingerling size distribution of 100% of the fingerlings being in the 4-6" range.

Fingerlings stocked in March will be raised to an average 1.5 lbs (minimum 1.25 lb) over a two year period. 30% of the fish will be harvested in May-June of the following year, 30% will be harvested the following August, 20% will be harvested the following November, and 20% will be harvested in March two years after being stocked. A 1.5% per month mortality is applied to all fish.

Obtaining fingerlings will vary depending on farm size:

- On a 250-acre farm, the operation will buy fingerlings
- On a 750-acre farm, the operation will either buy fingerlings and/or operate a hatchery. This size operation will typically buy fry and raise them to 5" fingerlings for stocking into grow-out ponds. Approximately 10% of total water acreage will be allocated for fry to 5" fingerling production.
- On a 1,500-acre farm, the operation will either buy fingerlings and/or operate a hatchery. At this size operation, a hatchery will be operated on-farm. Brood stock acreage will be approximately 60 acres, and acreage devoted to fry to 5" fingering production will be 150 water acres or 10% of total water acreage.

D. Mortality

The loss rate is approximately 25% over the total production cycle. A 1.5% mortality per month or 18% per year loss rate is used. In these enterprise budgets, the feed conversion ratio is less efficient than for larger-sized farms.

E. Feed Conversion Ratios (FCR)

The FCR is the ratio of feed fed to pounds of fish grown and may range between 2.2 and 2.4. As farm size increases there are more inefficiencies in feeding fish, therefore for these enterprise budget calculations, the FCR for each farm size will be:

- 2.2 for 250-acre farms,
- 2.3 for 750-acre farms, and
- 2.4 for 1,500 acre farms.

F. Other production inputs

1. Hydrated lime - for eradication of Ram=s Horn snail and breaking the pelican-snail-catfish biological life cycle of the trematode. The amount of lime applied per trematode application is based upon applying two treatments per year in locations where birds are a problem (near sloughs, etc.) and at least 1 time per year in other locations.

Trematode Treatment Methods:

a) Lime slurry: it costs approximately $15/acre to treat with a lime slurry; however you must buy a truck load at a time, which is a 2,500 gallon minimum. One truckload costs $2,500 and will treat approximately 160 acres.

b) Copper sulfate: it costs approximately $9/acre to treat with copper sulfate and is the treatment used in this analysis. The advantage of using copper sulfate is that the farmer can make up a rig to apply the copper sulfate any time. Copper sulfate treatments for snails is applied at 10 pounds per 250 feet of levee. Treatments are applied in May when only 1 treatment is used. In areas frequently visited by white pelican, two treatments are used and are applied in April and July/August.

Other than for trematode treatment, no lime is required for Delta catfish culture as the alkalinity is sufficiently high naturally.

2. Salt - initially added to ponds at a rate of two tons per year and at the rate of one ton per year thereafter. This is done to maintain chloride levels at ___ which helps keep catfish healthy.

3. Water pumping - required to initially fill the pond. The average pond in the delta is now approximately 12 water surface acres having a 15-year life. The average pond depth is 3' in the shallow end and 5' in the deep end, averaging 4 feet. Thus, 48 acre-feet of water are required to initially fill the pond. Relatively shallow wells tap into the underlying aquifer to supply this water.

During summer, evaporation losses are high and the pond water level is maintained by pumping 34" of water to make up for evaporation losses. Well operation costs are based on the January 1996 MAFES Bulletin Number 1039, ARice Water Use and Costs@ that provide operating costs for acre-inch of well pumping for rice field irrigation. These costs should apply for aquaculture as well as the same well depths into the same aquifer is being used.

The well operation average variable cost per acre-inch of water is:

- $1.54 per acre-inch using electricity powered well pumps. For example, 36 inches of pumped water multiplied by $1.54 = $55.44 per 3 acre-feet of pumped water multiplied by a 12-acre pond surface area = $665.28 to replace evaporation losses for one 12-acre pond.

- $1.81 per acre-inch using diesel powered well pumps and would cost $782 per pond. For these enterprise budget estimations, electric water pumps are used. There is 1 well for every 6-7 ponds or 1 well for every 60-80 water acres, therefore for the 250-acre farm there are 4 wells.

4. Off-flavor prevention - either copper sulfate or diuron is used to control blue-green algae that can produce off-flavor in catfish. Off-flavor prevents fish from being harvested, which causes additional time and money to be spent raising the fish, so efforts to reduce off-flavor are tried.

a. One to two treatments per acre per year of copper sulfate is applied to obtain a 1.5 ppm dose. It is applied at a 4.2 lb/acre-foot of water multiplied by 4' average pond depth (= 16.8 lb/surface acre), multiplied by 1.5 treatments per acre per year to get a 25.2 lb/acre/year application amount.

b. Diuron usage calculations

0.5 ounce per acre - ft of water
x 48. acre-ft of water in 12-acre (avg 4' depth) pond
24. ounces of diuron applied per pond, per treatment

x 5.83 diuron treatments per pond in the Mississippi Delta (Hanson, MAFES Bulletin No. 1101, March 2001)
= 139.92 ounces applied per pond/year
x 250 acres of water

= 34,980 ounces applied
) 16 ounces in 1 lb

= 2186.25 lbs of diuron used
) 4 lb bag of diuron

= 547 bags
x $24 per 4 lb bag of diuron

= $ 13,118 cost of diuron to treat all ponds

which is $52 per acre-foot of application. Applications in this analysis are made once in June, 4 times in July and once in August at weekly intervals.

5. Aeration - needed to manage water quality and specifically to maintain dissolved oxygen levels above 4 ppm. Aeration will differ by farm size. Most farms use fixed electrical 10-hp aerators with additional tractor powered PTO paddlewheels that are mobile and can be transported to any pond in critical need. Diesel generator usage occurs, but is more dependent on farm location than farm size, i.e., in areas where electricity continuity is in doubt. Electric aeration is used by approximately 90% of delta farmers, with diesel generated aeration electricity being used by the remaining 10% of the farmers (mainly by a small number of larger farm operations).

It is approximated that 60 - 70% of all delta catfish farmers use one 10-hp fixed aerator plus one tractor back-up paddewheel aerator per 12-acre pond. Furthermore, it is approximated that 30 - 40% of delta catfish operations use two 10-hp aerators plus one tractor back-up paddlewheel aerator per pond.

A general rule-of-thumb is that a fixed 10-hp electric aerator will support 30,000 lb of catfish and a good tractor-driven sidewinder paddlewheel aerator will also support approximately 30,000 lb of fish. One study showed an average of 640 - 720 hours of aeration per pond per year was required to maintain proper dissolved oxygen levels (REFERENCE). An Arkansas Yield Verification study reported 117 hours/acre/year of electric aeration plus 13.5 hours per acre year of emergency tractor-driven aeration for an 11 acre pond stocked at 7,275 fish per acre.

In this analysis, aeration is being applied at the rate of 600 hours of fixed electrical aeration plus 300 hours of emergency tractor-driven aeration per pond. No aeration is applied during the months of January, February, March, and December. Electrical aeration is applied as follows: one week in April and November, two weeks in October, three weeks in May and September, and four weeks in June, July and August. Tractor-driven aeration is applied equally in July and August for four weeks.

6. Fuel and Lubricants - (gasoline, diesel, lubricants, electricity)

- Gasoline consumed by trucks is estimated based on mileage driven per year. The price of gasoline used in this analysis is $0.85/gallon.

- It was estimated that 4,652 gallons of gasoline was used for feeding fish (x $0.85/gallon = $3,954).

- It was estimated that 7,500 gallons of gas is used annually in the 250-acre operation for transportation (x $0.85/gallon = $6,375).

- It was estimated that 240 gallons of gas is used for boating activities during fish harvesting (x $0.85/gallon = $204).

- Diesel consumption is at the rate of 3.4 gal/hr for 45-65 hp tractor (per hour of PTO-driver aerator usage). Diesel fuel cost $1.05/gallon for this analysis.

- It was estimated that 5,528 gallons of diesel fuel was used for tractor-driven PTO aeration (x $1.05 per gallon of diesel fuel = $5,804).

- It was estimated that 651 gallons of diesel fuel was used for mowing grass on levees (x $1.05 per gallon of diesel fuel = $684).

- Oil/Grease used to maintain trucks, tractors, aerators, mowers, etc.

- Electricity is used for aeration and well pumping.

- a 10-hp electric aerator uses 8.47 kwh/hr of operation (Keenum & Waldrop, 1988, Appendix Table 16), for example, aeration electricity charges are calculated by multiplying 8.47

kwh/hr of 10-hp aerator operation times $0.11 per kw/hr of electricity = $0.72 per hour of electrical aerator operation,

- a 60-hp electric-powered well pump uses 50.85 kwh/hr of operation

Note: electrical utilities also have a per electrical meter charge as well as the cost of electricity. For this analysis, there is one electrical meter for every four ponds, therefore for the@

- 250-acre farm having 21 ponds (20 12-acre plus one irregular pond of 10-acres) would have 5 electrical meters.

7. Labor requirements - number of employees vary by farm size.

Diversification of farm operations is the goal of delta catfish farms in the 100 - 120 acre size range and requires 1 manager plus 1 worker. Probably 10-15% of all delta catfish farms are less than 250 acres - this size operation would use custom harvesting. Most delta catfish farms are greater than 250 water acres.

a) For a 250-acre farm, labor would be arranged as follows:

- 1 manager that does the catfish feeding,
- 2 night men, who alternate monitoring dissolved oxygen levels,
- 5 people for levee grass mowing and seine harvesting of fish (no custom harvest at this size farm and thus only a $0.015 per pound transport expense is charged by the processing company). Alternating d.o. monitoring implies the two men are needed to cover 7 days and all hours or 40 hours per person during summer hours, i.e., 10 hrs/night x 7 days = 70 hours. These workers hours are less during the winter when aeration is not a problem and they would help with seining or chasing birds.

b) For a 750-acre farm, that is contiguous, labor would be arranged as follows:

- 1 manager,
- 1 assistant manager who will do fish feeding,
- 4 night men to monitor dissolved oxygen levels,
- 7 people for levee grass mowing and seine harvesting of fish, and
- 1 bookkeeper.

c) For a 1,500-acre farm, that is not contiguous, labor would be arranged as follows:

- 1 manager,
- 1 assistant manager who will do fish feeding,
- 2 full-time harvest seine crews (5 people per crew) with 1 of the 10 being an assistant manager,
- 2-3 feeders (1 will be manager and 1 will be an assistant manager),
- 1 shop foreman who will have 1 helper,
- 4 night men to monitor dissolved oxygen levels, and
- 1 bookkeeper/secretary position.

Labor compensation rates used in developing the 250-acre Mississippi Delta catfish farm are:

- $35,000 per year for a manager feeding and running the d.o. crew,
- $25,000 per year for a foreman who is in charge of fish harvesting, other seining, mowing and levee grading,
- $15,000 - 18,000 for seining and mowing personnel, and
- $18,000 for each person in the d.o. monitoring crew.

8. Bird predation - from mid November to Mid-March double crested cormorants, white pelicans, and other birds migrate into the Mississippi delta region of aquaculture production and consume a tremendous amount of fish. Additional labor activities during these months include bird chasing, placing pyrotechnics, and shooting of birds (with proper permits).

G. Equipment (see table of pond construction, equipment and machinery costs).

H. Pond configurations - ponds that have been built in the last 5 - 10 years are generally smaller than in the 1970's and 1980's. The average size pond now is approximately 12 water surface acres.

- A 250-water acre pond will have: 20 12-acre ponds plus 1 10-acre pond. A 12-acre pond will be approximately 518 ft width x 1,045 ft length (3,126 feet circumference (outside dimension). The main levee will have a 25' wide crown, and 18' will be graveled. The cross levees will have 18' crowns.

Only 18' of the main levee width will be covered with gravel. (Gravel computation: 518' x 10 ponds = 5,180' + 200' for ramps = 5,380' of levee needing gravel. A 6" gravel depth is used. Running gravel levee 18' of gravel on 25' levee = 48,420 cubic feet divided by 27 cubic feet per cubic yard = 1,793 cubic yards divided by 22 cubic yards = 81.5 truckloads of gravel needed multiplied by $130 per truckload = $10,597 for graveling the main levee.

Calculations for main levee gravel cost:

5,380 ft 18' wide and 6" deep =	48,420 ft^3
cost $13,000	) 27 ft^3
	1,793 yd^3
22 cu yd/truck load	) 22 yd^3
$130 per load	81.5
	x 130
	$10,597

Assumptions for Delta MS production of channel catfish, 2001.

Farm Size

1500	acre of water surface area for grow-out

Feed Price

$ 280	per ton for feed in a grow-out phase

15 - 25	months to grow 5" fingerlings (ranging in size from 4" - 6") to 1.5 lb harvest-sized fish

Approximately 30% of the fish will be harvested in May-June (Year 2) in the year after stocking
another 30% will be harvested the following August of Year 2, another 20% in November Year 2
and the remaining 20% will be harvested in March (Year 3) two years after initial stocking.

Harvest-Fish Info

0.7	$/lb food fish; FARMER NETS	$ 0.685	AFTER FISH TRANSPORTATION COSTS
1.5	lb fish final weight		NO CHARGE FOR HARVESTING AS IT IS DONE ON-FARM
2.40	feed conversion rate (lbs feed fed to lbs of fish harvested)		
1.5%	monthly mortality rate =	18%	per year

Fingerling Info Fingerlings are stocked every March over the entire farm water acreage

0.05	price for 5" fingerling (4" to 6" range)
30	lb/1,000 5" fingerlings
7500	fingerlings per acre stocking rate

Harvest Info

0.000	Seine & harvest of food fish, $/lb harvested
	Above a 250-acre farm size custom harvesting is not used as hired labor will do harvesting
0.015	$/pound of fish transported

Interest Rates

Long-term	10%	per year
Medium-term	10%	per year
Short-term	10%	per year

Operating expense constants

	REPAIRS & MAINTENANCE
38,277	- per year
3,190	- per month
	LABOR
55,000	Manager salary, $/year **see the labor spreadsheet for more details**
40,000	Assistant manager, $/year
40,000	Shop foreman, $/year
15,000	Shop helper, $/year
15,000	Feeder, $/year
20,000	Bookeeper/secretary, $/year
	Hired labor, $/year
25,000	Foreman
16,500	Labor for seining, mowing, grading and facilities maintenance
18,000	Night time labor for d.o. monitoring person, $/year
53	Salt, $/ton
15	Lime, $/ton
32	Copper sulfate, $/50 lb bag
9	$ per copper sulfate treatment for TREMATODE CONTROL, one treatment per year
24	Diuron, $/4 lb bag
9	$ per diuron treatment for OFF-FLAVOR CONTROL, average of 5.83 treatments per pond
600	Supplies & admin., $50/month
0.11	Electricity, per KWhr at off-peak rate
92	Fuel & lubricants, $/acre
6.25	Insurance, $/acre
2,500	Telephone, $/year
2,400	Accounting/legal, $/year
2,000	Bird chasing and ammunition, $/year
1.25	gasoline price for agriculture, $/gallon
1.05	diesel price, $/gallon

Catfish budget for a 1,500-acre Mississippi Delta farm, 2001.

Acres		1500					
Final weight, lb		1.5					
Stocking rate, fingerlings/acre		7500					
Feed fed per pound of fish gain		2.40					
Price per lb of fish		0.7					
Price to seine harvest-sized fish,$/lb		0.00	at this size operation on-farm labor does seining				
Price to transport harvested fish,$/lb		0.015					
Begin weight, lb/1,000		30					
Price of feed, $/ton	$	280					
Electricity cost, $/kw-hr		$0.110					
Interest rates: Short-term		10%	Intermediate: 10%		Long-term: 10%		
Hired labor rate, $/week		$0					
Fingerling price, $/each		0.05					

	Weight Each	Unit	Quantity	Price or Cost / unit	Value or Cost	Per Acre Value	
1. Gross Receipts							53% survival or 47% mortality
Catfish sales	1.5 lb		8,929,710	0.70	6,250,797	4,167	2.55 5,953
							6,379,500 lbs produced using calculated MS state average with NASS figures
2. Variable Costs							
Feed, food fish		ton	11,392	280	3,189,648	2,126	64%
Labor							
Management		year	2	95,000	95,000	63	2%
Hired labor, at various wages		year	7	299,500	299,500	200	6%
Fingerlings		each	11,250,000	0.050	562,500	375	11%
Transport of harvested fish /1		lb	8,929,710	0.015	133,946	89	3%
Fuel & lubricants							
Diesel		gal	22,332	1.05	23,449	16	0%
Gasoline		gal	12,392	1.25	15,490	10	0%
Electricity							
Aeration		10-hp hr	12,596	0.932	11,736	8	0%
Meter charges		meter-month	60	35	2,100	1	0%
Water pumping		acre	1500	55.44	83,160	55	2%
Repairs and Maintenance		month	12	3,190	38,277	26	1%
Bird chasing		year	1	2,000	2,000	1	0%
Chemicals							
Salt		ton	1500	53	79,500	53	2%
Diuron, off-flavor control		trt/acre	9,000	9	81,000	54	2%
Copper sulfate, trematode treat.		trt/acre	1500	9	13,500	9	0%
Miscellaneous expenses		per acre	1,500	25	37,500	25	1%
Interest on Operating Capital		dol	4,668,305	0.10	350,123	233	7%
TOTAL VARIABLE COSTS					5,018,428	3,346	100%
3. Income Above Variable Cost					1,232,369	822	
4. Fixed Cost							
Land charge (not included)		dol	1,440,000	0.10	0	0	0%
Machinery depreciation		dol			41,650	28	12%
Pond depreciation		dol			136,840	91	39%
Taxes (land)		acre	30	1500	45,533	30	13%
Interest on Pond Construction Costs		dol.&%	1,071,900	0.10	107,190	71	30%
Interest on Equipment/Mach. Purchases		dol &%	218,320	0.10	21,832	15	6%
TOTAL FIXED COSTS					353,045	235	100%
5. Overhead /2							
Telephone		month	12	208	2,500	2	15%
Accounting/legal		year	1	2,400	2,400	2	14%
Supplies and Administrative		year	1	600	600	0	3%
Office supplies		year	1	600	600	0	3%
Insurance, general liability		acre	1,500	6.25	9,375	6	54%
Insurance on equipment, machinery		dol/$	436,640	0.004	1,747	1	10%
TOTAL OVERHEAD COSTS					17,222	11	100%
6. Total of All Specified Expenses					5,388,694	3,592	
7. Net Returns Above All Specified Expenses /3					862,103	575	
Net Returns Per Acre:	**Above Specified Variable Costs**				822	822	
	Above Specified Total Costs				575	575	
Breakeven Price:	**To Cover Specified Variable Expenses**				0.56	0.56	
	To Cover Specified Total Expenses				0.60	0.60	

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.
/2 Overhead expenses include telephone, accounting, legal, supplies, administration, and insurance (general liability and equipment).
/3 Labor and Management expenses have been included, but no expense has been included for land, therefore Net Returns to Land is represented by this budget.

Sensitivity Analysis - Estimated Net Returns Per Acre Above ALL Expenses
At Varied Selling Price and Feed Price /1

	Price Received for Catfish, $/lb						
Feed Price, $/ton	**0.55**	**0.60**	**0.65**	**0.70**	**0.75**	**0.80**	**0.85**
190	417	714	1,012	1,309	1,607	1,905	2,202
200	335	633	930	1,228	1,526	1,899	2,121
210	253	551	849	1,146	1,444	1,893	2,039
220	172	469	767	1,065	1,362	1,888	1,958
230	90	388	685	983	1,281	1,882	1,876
240	8	306	604	901	1,199	1,876	1,794
250	-73	224	522	820	1,117	1,871	1,713
260	-155	143	440	738	1,036	1,865	1,631
270	-237	61	359	656	954	1,859	1,549
280	-318	-21	277	575	872	1,854	1,468
290	-400	-102	195	493	791	1,848	1,386
300	-482	-184	114	411	709	1,842	1,304
310	-563	-265	32	330	627	1,836	1,223

Sensitivity Analysis - Estimated Net Returns Per Acre Above Variable Expenses
At Varied Selling Price and Feed Price /1

	Price Received for Catfish, $/lb						
Feed Price, $/ton	**0.55**	**0.60**	**0.65**	**0.70**	**0.75**	**0.80**	**0.85**
190	663	961	1,259	1,556	1,854	2,152	2,449
200	582	879	1,177	1,475	1,772	2,146	2,368
210	500	798	1,095	1,393	1,691	2,140	2,286
220	418	716	1,014	1,311	1,609	2,135	2,204
230	337	634	932	1,230	1,527	2,129	2,123
240	255	553	850	1,148	1,446	2,123	2,041
250	174	471	769	1,066	1,364	2,117	1,959
260	92	390	687	985	1,283	2,112	1,878
270	10	308	606	903	1,201	2,106	1,796
280	-71	226	524	822	1,119	2,100	1,715
290	-153	145	442	740	1,038	2,095	1,633
300	-235	63	361	658	956	2,089	1,551
310	-316	-19	279	577	874	2,083	1,470

Sensitivity Analysis - Estimated Net Returns Per Acre Above ALL Expenses
At Varied Selling Price and Feed Price /1

	Price Received for Catfish, $/lb						
Feed Price, $/ton	**0.55**	**0.6**	**0.65**	**0.7**	**0.75**	**0.8**	**0.85**
190	417	714	1,012	1,309	1,607	1,905	2,202
200	335	633	930	1,228	1,526	1,899	2,121
210	253	551	849	1,146	1,444	1,893	2,039
220	172	469	767	1,065	1,362	1,888	1,958
230	90	388	685	983	1,281	1,882	1,876
240	8	306	604	901	1,199	1,876	1,794
250	-73	224	522	820	1,117	1,871	1,713
260	-155	143	440	738	1,036	1,865	1,631
270	-237	61	359	656	954	1,859	1,549
280	-318	-21	277	575	872	1,854	1,468
290	-400	-102	195	493	791	1,848	1,386
300	-482	-184	114	411	709	1,842	1,304
310	-563	-265	32	330	627	1,836	1,223

Jim Steeby - FISHY results for feed fed & used in this analysis.

Spreadsheet for growth of 5" fish to average harvest size 1.5 lb

		Fish in Pond	Harvest#	Weight	Monthly Per Acre Feed Fed	Total Fed	Feed Fed for: 1500 water acres
Harvested	March	7500			52		78,000
Percent	April	7388			150		225,000
	May	7277			352		528,000
	June	7168			700		1,050,000
	July	7060			1152		1,728,000
	August	6954			2098		3,147,000
	Sept	6850			1848		2,772,000
	October	6747			1418		2,127,000
	November	6646			48		72,000
	December	6546			48		72,000
	Jan	6448			64		96,000
	Feb	6351			64	7994	96,000
	March	6256			504		756,000
	April	6162			1480		2,220,000
	May	6070			1820		2,730,000
30%	May-Harvest	4220	1,849 fish	2773			
	June	4157			1238		1,857,000
	July	4094			1800		2,700,000
43%	August-Harvest	2334	1760 fish	2640			
	August	2299			734		1,101,000
	Sept	2265			718		1,077,000
	October	2231			660		990,000
50%	Nov-Harvest	1115	1116 fish	1674			
	November	1098			8		12,000
	December	1082			8		12,000
	January	1066			10		15,000
	Febuary	1050			16		24,000
All	Mar-harvest	1050	1050 fish	1575	48	9044	72,000
			5775	8662		17038	25,557,000

8662 lb fish @ 2.2 means 17,325 lb of feed total fed 1.97

Total feed accounted for in this sheet 17,038lb

All data are based on one single water acre

Assumptions are that all harvested fish weight 1.5 lb
and that the remaining fish average 0.9 lb

TOTAL

Month #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Month-Year #	Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02
Monthly **FEED** for:															
Stocking #1	-	-	78,000	225,000	528,000	1,050,000	1,728,000	3,147,000	2,772,000	2,127,000	72,000	72,000	96,000	96,000	756,000
Stocking #2															78,000
Stocking #3															
Stocking #4															
Stocking #5															
TOTAL FEED, lb/MONTH	0	0	78,000	225,000	528,000	1,050,000	1,728,000	3,147,000	2,772,000	2,127,000	72,000	72,000	96,000	96,000	834,000
TOTAL TONS/MONTH	0	0	39	113	264	525	864	1,574	1,386	1,064	36	36	48	48	417
COST OF FEED, tons*cos	0	0	10,920	31,500	73,920	147,000	241,920	440,580	388,080	297,780	10,080	10,080	13,440	13,440	116,760
HARVESTS from:															
Stocking #1															
Stocking #2															
Stocking #3															
Stocking #4															
Stocking #5															
TOTAL HARV/MONTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Month #	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Month-Year #	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03
Monthly **FEED** for:															
Stocking #1	2,220,000	2,730,000	1,857,000	2,700,000	1,101,000	1,077,000	990,000	12,000	12,000	15,000	24,000	72,000			
Stocking #2	225,000	528,000	1,050,000	1,728,000	3,147,000	2,772,000	2,127,000	72,000	72,000	96,000	96,000	756,000	2,220,000	2,730,000	1,857,000
Stocking #3												78,000	225,000	528,000	1,050,000
Stocking #4															
Stocking #5															
TOTAL FEED, lb/MONTH	2,445,000	3,258,000	2,907,000	4,428,000	4,248,000	3,849,000	3,117,000	84,000	84,000	111,000	120,000	906,000	2,445,000	3,258,000	2,907,000
TOTAL TONS/MONTH	1,223	1,629	1,454	2,214	2,124	1,925	1,559	42	42	56	60	453	1,223	1,629	1,454
COST OF FEED, tons*cos	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	15,540	16,800	126,840	342,300	456,120	406,980
HARVESTS from:															
Stocking #1		4,159,500			3,960,000			2,511,000				2,362,500			
Stocking #2														4,159,500	
Stocking #3															
Stocking #4															
Stocking #5															
TOTAL HARV/MONTH	0	4,159,500	0	0	3,960,000	0	0	2,511,000	0	0	0	2,362,500	0	4,159,500	0

Month #	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Month-Year #	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04
Monthly **FEED** for:															
Stocking #1															
Stocking #2	2,700,000	1,101,000	1,077,000	990,000	12,000	12,000	15,000	24,000	72,000						
Stocking #3	1,728,000	3,147,000	2,772,000	2,127,000	72,000	72,000	96,000	96,000	756,000	2,220,000	2,730,000	1,857,000	2,700,000	1,101,000	1,077,000
Stocking #4									78,000	225,000	528,000	1,050,000	1,728,000	3,147,000	2,772,000
Stocking #5															
TOTAL FEED, lb/MONTH	4,428,000	4,248,000	3,849,000	3,117,000	84,000	84,000	111,000	120,000	906,000	2,445,000	3,258,000	2,907,000	4,428,000	4,248,000	3,849,000
TOTAL TONS/MONTH	2,214	2,124	1,925	1,559	42	42	56	60	453	1,223	1,629	1,454	2,214	2,124	1,925
COST OF FEED, tons*cos	619,920	594,720	538,860	436,380	11,760	11,760	15,540	16,800	126,840	342,300	456,120	406,980	619,920	594,720	538,860
HARVESTS from:															
Stocking #1															
Stocking #2		3,960,000			2,511,000				2,362,500						
Stocking #3											4,159,500			3,960,000	
Stocking #4															
Stocking #5															
TOTAL HARV/MONTH	0	3,960,000	0	0	2,511,000	0	0	0	2,362,500	0	4,159,500	0	0	3,960,000	0

Month #	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	TOTALS		
Month-Year #	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05			
Monthly **FEED** for:																		
Stocking #1																		
Stocking #2																		
Stocking #3	990,000	12,000	12,000	15,000	24,000	72,000												
Stocking #4	2,127,000	72,000	72,000	96,000	96,000	756,000	2,220,000	2,730,000	1,857,000	2,700,000	1,101,000	1,077,000	990,000	12,000	12,000			
Stocking #5						78,000	225,000	528,000	1,050,000	1,728,000	3,147,000	2,772,000	2,127,000	72,000	72,000			
TOTAL FEED, lb/MONTH	3,117,000	84,000	84,000	111,000	120,000	906,000	2,445,000	3,258,000	2,907,000	4,428,000	4,248,000	3,849,000	3,117,000	84,000	84,000	113,916,000	FCR =	2.30
TOTAL TONS/MONTH	1,559	42	42	56	60	453	1,223	1,629	1,454	2,214	2,124	1,925	1,559	42	42	56,958	11,392	tons fed per year
COST OF FEED, tons*cos	436,380	11,760	11,760	15,540	16,800	126,840	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	15,948,240	7.59	tons fed per acre
HARVESTS from:																		
Stocking #1																		
Stocking #2																		
Stocking #3		2,511,000				2,362,500												
Stocking #4								4,159,500			3,960,000			2,511,000				
Stocking #5																		
TOTAL HARV/MONTH	0	2,511,000	0	0	0	2,362,500	0	4,159,500	0	0	3,960,000	0	0	2,511,000	0	49,609,500	6,615	lb/ac/year

Pond construction and equipment cost for a 250 acre catfish farm in the Mississippi Delta. /1

Item	Unit	Cost/unit	Number	Cost	Useful Life	Average Investment	Annual Avg. Depreciation /2	Interest on Investment /3	Repairs as a Percent of New Cost	Annual Reparis and Maintenance
A. Capital cost										
Land purchase (not included)	**acre**	**$ 800**	**1800**	$ 1,440,000			-	$ 144,000		
Pond construction	**acre**	**$ 1,315**	**1500**	$ 1,972,500	15	986,250	$ 131,500	$ 98,625	10%	$ 13,150
Gravel	**cu. yd.**	**$ 43**	**1500**	$ 64,500		32,250	$ -	$ 3,225		
Well, 3,000 gpm, 60-hp electric motor	**each**	**$ 15,360**	**5**	$ 76,800	20	38,400	$ 3,840	$ 3,840	75%	$ 2,880
Shop, 30' x 50'	**ea**	**$ 30,000**	**1**	$ 30,000	20	15,000	$ 1,500	$ 1,500	10%	$ 150
Subtotal (excluding land cost)				**$ 2,143,800**		**$ 1,071,900**	**$ 136,840**	**$ 107,190**		**$ 16,180**
B. Equipment										
Shop tools and equipment	**ea**	**$ 10,000**	**1**	$ 10,000	10	5,000	$ 1,000	$ 500	10%	$ 100
Trucks, 3/4 ton, 4WD	**ea**	**$ 20,000**	**2**	$ 40,000	5	20,000	$ 8,000	$ 2,000	45%	$ 3,600
Feed bin, 10 ton capacity	**ea**	**$ 7,000**	**2**	$ 14,000	20	7,000	$ 700	$ 700	10%	$ 70
Tractors, 45-65 hp	**ea**	**$ 20,000**	**10**	$ 200,000	14	100,000	$ 14,286	$ 10,000	75%	$ 10,714
Aerators, electric 10-hp /4	**ea**	**$ 4,000**	**21**	$ 84,000	10	42,000	$ 8,400	$ 4,200	50%	$ 4,200
PTO water pump, used	**ea**	**$ 1,500**	**1**	$ 1,500	10	750	$ 150	$ 75	45%	$ 68
PTO aerators	**ea**	**$ 3,400**	**10**	$ 34,000	10	17,000	$ 3,400	$ 1,700	25%	$ 850
Bush hog/mower, 6' side mount	**ea**	**$ 6,940**	**1**	$ 6,940	10	3,470	$ 694	$ 347	20%	$ 139
Pull-behind mower, 6' width	**ea**	**$ 5,000**	**1**	$ 5,000	10	2,500	$ 500	$ 250	20%	$ 100
Truck Mounted Feeder, 2-4 ton with electronic feeder scale, used	**ea**	**$ 7,500**	**1**	$ 7,500	10	3,750	$ 750	$ 375	25%	$ 188
DO meter and accessories	**ea**	**$ 1,500**	**2**	$ 3,000	10	1,500	$ 300	$ 150	202%	$ 606
Computer	**ea**	**$ 1,500**	**1**	$ 1,500	10	750	$ 150	$ 75	10%	$ 15
Boat, motor and trailer	**ea**	**$ 4,200**	**1**	$ 4,200	10	2,100	$ 420	$ 210	65%	$ 273
Mobile 2-way radio & base unit	**ea**	**$ 2,000**	**1**	$ 2,000	10	1,000	$ 200	$ 100	25%	$ 50
Seine net, 10 ft deep, 1/2" mesh	**ea**	**$ 4,000**	**1**	$ 4,000	5	2,000	$ 800	$ 200	50%	$ 400
Hydraulic takeup reel with trailer	**ea**	**$ 4,000**	**1**	$ 4,000	10	2,000	$ 400	$ 200	50%	$ 200
2-1/1 ton used boom truck	**ea**	**$ 15,000**	**1**	$ 15,000	10	7,500	$ 1,500	$ 750	35%	$ 525
Subtotal				**$ 436,640**		**$ 218,320**	**$ 41,650**	**$ 21,832**		**$ 22,097**
TOTAL				**$ 2,580,440**		**$ 1,290,220**	**$ 178,490**	**$ 129,022**		**$ 38,277**

/1 For this size operation, 250 acres, an office building is not required, as most paperwork and administration would be conducted out of the home.

/2 Computed by the straight line method with zero salvage value for depreciable items.

/3 Land and pond construction is charged at a long-term interest rate and equipment items are charged at an intermediate-term interest rate. Charged at 10% on the total value of land with all other depreciable items charged at 10% on one-half of the investment.

/4 One fixed 10-hp aerator per pond is used.

Feeder truck - used 1 -ton truck with dual wheel rear end with heavy duty axle.

Electricity and Fuel

A. Well pumping to replace 36 acre-inches of water per year. From Jan. 1996 MAFES Bulletin # 1039, "Rice Water Use and Costs":
Average variable cost per acre-ince of water is: For electric pumps, $1.54/acre-inch, ($1.81/acre-inch with a diesel pump - not used here) therefore:

	36	acre-inches of water pumped annually
$	1.54	cost to pump per acre-inch
$	55.44	per required acre-inches of water annually
	1500	acres of water
$	83,160	annually to flush ponds and replace evaporation or…… 55.44 $/acre-inch pumped

B. Aeration electricity requirements for one 10-hp aerator per pond. /1

	# of days run	hours per day	# of ponds	Aeration Hours	No. of Kwh per hour of 10-hp aerator operation	Aeration Cost, $/kwh	Monthly Cost of Aeration
January	0	0	0	-	8.47	0.11	-
February	0	0	0	-	8.47	0.11	-
March	0	0	0	-	8.47	0.11	-
April	7	3	8	168	8.47	0.11	157
May	18	6	13	1,404	8.47	0.11	1,308
June	26	7	16	2,912	8.47	0.11	2,713
July	27	8	16	3,456	8.47	0.11	3,220
August	26	8	16	3,328	8.47	0.11	3,101
September	20	6	10	1,200	8.47	0.11	1,118
October	6	3	7	126	8.47	0.11	117
November	1	2	1	2	8.47	0.11	2
December	0	0	0	-	8.47	0.11	-
TOTAL AERATION HOURS				12,596			11,736

/1 The cost per hour of 10-hp aerator operation is 8.47kwh /hour of operation x electricity cost, or $ 0.932 per hour of 10-hp aerator operation

There is an additional charge of $35 per electrical meter. There is usually one electrical meter per every 4 ponds.
Thus, 21 ponds / 4 ponds/meter = 5 electrical meters on this farm.

C. Fuel
DIESEL
1. PTO-driven aerator - Diesel
45-65 hp tractor used for PTO-driven aerator

3.4	gallons of diesel used per hour of PTO operation
300	hours of PTO-driven aeration per pond
1,020	gallons of diesel for PTO emergency aeration
21	ponds on 250-acre farm
21,420	gallons of diesel fuel used for PTO aeration
1.05	$/gallon of diesel
$ 22,491	$ for diesel use on 250-acre catfish farm

2. Mowing - Diesel
from Keenum and Waldrop: $ 684 divided by $ 0.75 price of diesel 912 gallons used

912 gallons used x 1.05 2001 diesel price = $ 958

TOTAL DIESEL 22,332 GALLONS

GASOLINE
1. Feeding - Gasoline
Truck Mounted Feeder, 2-4 ton used

from Keenum and Waldrop: $ 3,954 divided by $ 0.85 price of gas = 4,652 gallons used

4,652 gallons used x 1.25 2001 gas price = $ 5,815

2. Boat and harvesting - Gasoline
from Keenum and Waldrop: $ 204 divided by $ 0.85 price of gas = 240 gallons used

240 gallons used x 1.25 2001 diesel price = $ 300

3. Transportation around the farm, to processor, to chase birds, check d.o., etc. - Gasoline
from Keenum and Waldrop: $ 6,375 divided by $ 0.85 price of gas = 7500 gallons used

7500 gallons used x 1.25 2001 diesel price = $ 9,375

TOTAL GAS 12,392 GALLONS

Chemical needs for a 250-acre MS Delta catfish farm.

Chemicals

Salt	to bring chlorides up to 100 ppm to prevent brown blood disease check chlorides after pond has been filled and add 2 tons of salt per acre After year 1 all ponds are treated in the spring at 1 ton acre	
Lime	Do not need to add lime to delta waters as their alkalinity level is fine However, lime is used as a trematode treatment; costs about $15/acre In this scenario, we have chosen to use copper sulfate for trematode treatment.	
Copper sulfate	For off-flavor: treat at 5 lb/acre/application when water is above 70F which is about 20 applications per year For trematode treatment: apply at Cost is approximately $9/acre	5 lb/acre treatment rate 20 applications per year
Diuron	For off flavor treatment 0.5 ounces per acre-foot of water applied weekly for up to 9 treatments per pond - In the delta 5.83 applications of diuron were used per pond (Hanson, 2001)	

Labor Requirements for a:

1500 water acre Delta MS catfish farm

Pay Amount		Number	Total Annual Cost, $	Position and responsibility
Operations Management				
55,000	$/year	1	$ 55,000	Manager - overall manager and does feeding
40,000	$/year	1	$ 40,000	Assistant manager
Subtotal		2	$ 95,000	
20,000	$/year	1	$ 20,000	Bookkeeper/secretary
25,000	$/year	1	$ 25,000	Foreman - oversees hired laborers
40,000	$/year	1	$ 40,000	Shop foreman
15,000	$/year	1	$ 15,000	Shop helper
15,000	$/year	1	$ 15,000	Feeder
18,000	$/year /1	4	$ 36,000	Night dissolved oxygen monitoring workers
16,500	$/year	9	$ 148,500	People doing mowing and seining (no custom harvesting)
Subtotal		17	$ 299,500	
TOTAL			$ 394,500	

Taxes on Delta Catfish Acreage

1	Water and Levee acres
1,315	x construction cost
1315	pond construction value
750	+ land use value per acre in the delta of MS
2065	sum of construction value and land use value
309.75	x 15% assessment rate
0.098	x milleage rate
30.3555	TAX
45,533	TOTAL TAX FOR THIS SIZE FARM
1500	WATER ACRES

Cash flow, Year 1, for a 250-acre catfish farm in the Delta, Mississippi, 2001.

Month				Jan-01	Feb-01	Mar-01	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Total
Food fish sales (lb)				0	0	0	0	0	0	0	0	0	-	-	-	-
BEGINNING CASH BALANCE				1,000	500	500	500	500	500	500	500	500	500	-1,614,455	500	
Cash Inflows																
Catfish sales	$	0.70	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL CASH INFLOW				1,000	500	500	500	500	500	500	500	500	500	(1,614,455)	500	
Operating Expenses																
Feed, food fish	$	280	ton	0	0	10,920	31,500	73,920	147,000	241,920	440,580	388,080	297,780	10,080	10,080	1,651,860
Labor																
Farm manager	$	95,000	year	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	95,000
Hired labor	$	299,500	year	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	299,500
Fingerlings, 5" (4"-6" range)	$	0.05	each			562,500										562,500
Harvest /1																
Seining	$	-	lb.	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	$	0.015	per lb	-	-	-	-	-	-	-	-	-	-	-	-	-
Fuel & lubricants																
Diesel																
- PTO-driven aeration	$	1.05	gallon						11,246	11,246						22,491
- Mowing	$	1.05	gallon			120	120	120	120	120	120	120	120			958
Gasoline																
- Transportation	$	1.25	gallon	781	781	781	781	781	781	781	781	781	781	781	781	9,375
- Boat and harvesting	$	1.25	gallon													
Utilities																
Aeration + Meter charge	$	0.93	kw-hr	175	175	175	332	1,483	2,888	3,395	3,276	1,293	292	177	175	13,836
Water pumping to flush ponds	$	55.44	/3ac-ft/yr					8,316	16,632	24,948	24,948	8,316				83,160
Repairs and Maintenance	$	38,277	year	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	38,277
Telephone	$	2,500	year	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Accounting/legal	$	2,400	year	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Bird chasing	$	2,000	year	500	500	250								250	500	2,000
Chemicals																
Salt	$	53	ton			79,500										79,500
Diuron, off-flavor control	$	9	trt/acre						2,250	9,000	2,250					13,500
Copper sulfate, trematode treat.	$	9	acre					13,500								13,500
Supplies & admin.	$	600	year	50	50	50	50	50	50	50	50	50	50	50	50	600
Taxes (land)	$	30.36	acre	-	-	-	45,533	-	-	-	-	-	-	-	-	45,533
Insurance	$	6.25	acre	9,375												9,375
Total Cash Operating Expenses				47,354	37,979	679,849	83,289	60,723	70,440	86,012	67,898	47,033	37,716	37,731	37,979	1,294,005
Scheduled debt payments																
Intermediate - principal				47,459	-	-	-	-	-		-	-	-	-	-	47,459
interest				39,298												
Long-term - principal										46,586						
interest										192,942						
TOTAL CASH OUTFLOW				134,111	37,979	679,849	83,289	60,723	70,440	325,540	67,898	47,033	37,716	37,731	37,979	1,341,463
CASH AVAILABLE				(133,111)	(37,479)	(679,349)	(82,789)	(60,223)	(69,940)	(325,040)	(67,398)	(46,533)	(37,216)	(1,652,186)	(37,479)	
New Borrowing				133,611	37,979	679,849	83,289	60,723	70,440	325,540	67,898	47,033	37,716	1,652,686	37,979	
Payment on																
Principal				-									1,544,078			
Interest				-									70,877			
ENDING CASH BALANCE				500	500	500	500	500	500	500	500	500	(1,614,455)	500	500	500
Summary of Debt Outstanding:																
Short-term				133,611	171,590	851,439	934,728	995,451	1,065,891	1,391,431	1,459,328	1,506,362	-	1,652,686	1,690,665	
Intermediate-term				389,181	389,181	389,181	389,181	389,181	389,181	389,181	389,181	389,181	389,181	389,181	389,181	
Long-term				2,143,800	2,143,800	2,143,800	2,143,800	2,143,800	2,143,800	2,097,214	2,097,214	2,097,214	2,097,214	2,097,214	2,097,214	
TOTAL DEBT OUTSTANDING				2,666,592	2,704,571	3,384,420	3,467,709	3,528,432	3,598,872	3,877,826	3,945,724	3,992,757	2,486,396	4,139,082	4,177,061	

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.

Cash flow, Year 2, for a 250-acre catfish farm in the Delta, Mississippi, 2001.

Month				Jan-02	Feb-02	Mar-02	Apr-02	May-02	Jun-02	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02		Total
Fish sales (lb)				0	0	0	0	4,159,500	0	0	3,960,000	0	0	2,511,000	0		10,630,500
BEGINNING CASH BALANCE				500	500	500	500	500	61,380	500	500	2,645,102	2,598,069	1,971,280	3,653,484		
Cash Inflows																	
Catfish sales	$	0.70	lb	0	0	0	0	2,911,650	0		2,772,000	0	0	1,757,700		$	7,441,350
TOTAL CASH INFLOW				500	500	500	500	2,912,150	61,380	500	2,772,500	2,645,102	2,598,069	3,728,980	3,653,484		
Operating Expenses																	
Feed, food fish	$	280	ton	13,440	13,440	116,760	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	$	3,562,440
Labor																	
Farm manager	$	95,000	year	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	$	95,000
Hired laborer	$	299,500	week	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	$	299,500
Fingerlings, 5" (4"-6" range)	$	0.05	each	-	-	562,500	-	-	-	-	-	-	-	-	-	$	562,500
Harvest /1																	
Seining	$	-	lb.	-	-	-	-	-	-	-	-	-	-	-	-	$	-
Transport	$	0.015	per lb	-	-	-	-	62,393	-	-	59,400	-	-	37,665	-	$	159,458
Fuel & lubricants																	
Diesel																	
- PTO-driven aeration	$	1.05	gallon						11,246	11,246						$	22,491
- Mowing	$	1.05	gallon			120	120	120	120	120	120	120	120			$	958
Gasoline																	
- Transportation	$	1.25	gallon	781	781	781	781	781	781	781	781	781	781	781	781	$	9,375
- Boat and harvesting	$	1.25	gallon					100			100			100			
Utilities																	
Aeration + Meter charge	$	0.93	kw-hr	175	175	175	332	1,483	2,888	3,395	3,276	1,293	292	177	175	$	13,836
Water pumping to flush ponds	$	55.44	/3ac-ft/yr					8,316	16,632	24,948	24,948	8,316				$	83,160
Repairs and Maintenance	$	38,277	year	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	$	38,277
Telephone	$	2,500	year	208	208	208	208	208	208	208	208	208	208	208	208	$	2,500
Accounting/legal	$	2,400	year	200	200	200	200	200	200	200	200	200	200	200	200	$	2,400
Bird chasing	$	2,000	year	500	500	250								250	500	$	2,000
Chemicals																	
Salt	$	53	ton			79,500										$	79,500
Diuron, off-flavor control	$	9	trt/acre						2,250	9,000	2,250					$	13,500
Copper sulfate, trematode treat.	$	9	acre					13,500								$	13,500
Supplies & admin.	$	600	year	50	50	50	50	50	50	50	50	50	50	50	50	$	600
Taxes (except income)	$	30.36	year	-	-	-	45,533	-	-	-	-	-	-	-	-	$	45,533
Insurance	$	6.25	acre	9,375													
Total Cash Operating Expenses				47,354	37,979	679,849	83,289	123,216	70,440	86,012	127,398	47,033	37,716	75,496	37,979	$	1,453,762
Scheduled debt payments																	
Intermediate - principal				-	-	-	-	-	-	239,528	-	-	-	-	-	$	239,528
interest																	
Long-term - principal				51,730						50,778							
interest				35,026						188,749							
TOTAL CASH OUTFLOW				134,111	37,979	679,849	83,289	123,216	70,440	565,068	127,398	47,033	37,716	75,496	37,979	$	1,693,290
CASH AVAILABLE				(133,611)	(37,479)	(679,349)	(82,789)	2,788,934	(9,060)	(564,568)	2,645,102	2,598,069	2,560,353	3,653,484	3,615,504		
New Borrowing				134,111	37,979	679,849	83,289	-	9,560	565,068	-	-	-	-	-		
Payment on																	
Principal					-			2,625,893					574,628				
Interest					-			101,661					14,445				
ENDING CASH BALANCE				500	500	500	500	61,380	500	500	2,645,102	2,598,069	1,971,280	3,653,484	3,615,504		
Summary of Debt Outstanding:																	
Short-term				1,824,776	1,862,755	2,542,604	2,625,893	-	9,560	574,628	574,628	574,628	-	-	-		
Intermediate-term				337,451	337,451	337,451	337,451	337,451	337,451	337,451	337,451	337,451	337,451	337,451	337,451		
Long-term				2,097,214	2,097,214	2,097,214	2,097,214	2,097,214	2,097,214	2,046,436	2,046,436	2,046,436	2,046,436	2,046,436	2,046,436		
TOTAL DEBT OUTSTANDING				4,259,442	4,297,421	4,977,270	5,060,559	2,434,666	2,444,226	2,958,515	2,958,515	2,958,515	2,383,887	2,383,887	2,383,887		

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.

Cash flow, Year 3, for a 250-acre catfish farm in the Delta, Mississippi, 2001.

Month				Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Total
Fish sales (lb)				0	0	2,362,500	0	4,159,500	0	0	3,960,000	0	-	2,511,000	0	12,993,000
BEGINNING CASH BALANCE				3,615,504	3,481,394	3,443,414	4,381,803	4,298,514	7,086,973	7,016,534	6,690,993	9,335,621	9,288,588	9,250,871	10,933,100	
Cash Inflows																
Catfish sales	$	0.70	lb	0	0	1,653,750	0	2,911,650	0	0	2,772,000	0	0	1,757,700		9,095,100
TOTAL CASH INFLOW				3,615,504	3,481,394	5,097,164	4,381,803	7,210,164	7,086,973	7,016,534	9,462,993	9,335,621	9,288,588	########	10,933,100	
Operating Expenses																
Feed, food fish	$	280	ton	15,540	16,800	126,840	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	3,577,980
Labor																
Farm manager	$	95,000	year	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	95,000
Hired laborer	$	299,500	week	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	299,500
Fingerlings, 5" (4"-6" range)	$	0.05	each			562,500										562,500
Harvest /1																
Seining	$	-	lb.	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	$	0.015	per lb	-	-	35,438	-	62,393	-	-	59,400	-	-	37,665	-	194,895
Fuel & lubricants																
Diesel																
- PTO-driven aeration	$	1.05	gallon						11,246	11,246						22,491
- Mowing	$	1.05	gallon			120	120	120	120	120	120	120	120			958
Gasoline																
- Transportation	$	1.25	gallon	781	781	781	781	781	781	781	781	781	781	781	781	9,375
- Boat and harvesting	$	1.25	gallon			75		75			75			75		300
Utilities																
Aeration + Meter charge		$0.932	kw-hr	175	175	175	332	1,483	2,888	3,395	3,276	1,293	292	177	175	13,836
Water pumping to flush ponds		$55.44	/3ac-ft/yr					8,316	16,632	24,948	24,948	8,316				83,160
Repairs and Maintenance	$	38,277	year	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	38,277
Telephone	$	2,500	year	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Accounting/legal	$	2,400	year	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Bird chasing	$	2,000	year	500	500	250								250	500	2,000
Chemicals																
Salt	$	53	ton			79,500										79,500
Diuron, off-flavor control	$	9	trt/acre						2,250	9,000	2,250					13,500
Copper sulfate, trematode treat.	$	9	acre					13,500								13,500
Supplies & admin.	$	600	year	50	50	50	50	50	50	50	50	50	50	50	50	600
Taxes (except income)	$	30.36	year	-	-	-	45,533	-	-	-	-	-	-	-	-	45,533
Insurance	$	6.25	acre	9,375												
Total Cash Operating Expenses				47,354	37,979	715,362	83,289	123,191	70,440	86,012	127,373	47,033	37,716	75,471	37,979	1,489,200
Scheduled debt payments																
Intermediate - principal				56,386	-	-	-	-	-		-	-	-	-	-	56,386
interest				30,371												
Long-term - principal										55,348						
interest										184,179						
TOTAL CASH OUTFLOW				134,111	37,979	715,362	83,289	123,191	70,440	325,540	127,373	47,033	37,716	75,471	37,979	1,545,585
CASH AVAILABLE				3,481,394	3,443,414	4,381,803	4,298,514	7,086,973	7,016,534	6,690,993	9,335,621	9,288,588	9,250,871	########	10,895,121	
New Borrowing				-	-	-	-	-	-	-	-	-	-	-	-	
Payment on																
Principal								-					-			
Interest								-					-			
ENDING CASH BALANCE				3,481,394	3,443,414	4,381,803	4,298,514	7,086,973	7,016,534	6,690,993	9,335,621	9,288,588	9,250,871	########	10,895,121	
Summary of Debt Outstanding:																
Short-term				-	-	-	-	-	-	-	-	-	-	-	-	
Intermediate-term				281,066	281,066	281,066	281,066	281,066	281,066	281,066	281,066	281,066	281,066	281,066	281,066	
Long-term				2,046,436	2,046,436	2,046,436	2,046,436	2,046,436	2,046,436	1,991,088	1,991,088	1,991,088	1,991,088	1,991,088	1,991,088	
TOTAL DEBT OUTSTANDING				2,327,502	2,327,502	2,327,502	2,327,502	2,327,502	2,327,502	2,272,153	2,272,153	2,272,153	2,272,153	2,272,153	2,272,153	

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.

Cash flow, Year 4, for a 250-acre catfish farm in the Delta, Mississippi, 2001.

Month				Jan-04	Feb-04	Mar-04	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Total
Fish sales (lb)				0	0	2,362,500	0	4,159,500	0	0	3,960,000	0	-	2,511,000	0	12,993,000
BEGINNING CASH BALANCE				10,895,121	10,761,010	10,723,031	11,661,419	11,578,130	14,366,590	14,296,150	13,970,610	16,615,237	16,568,204	16,530,488	18,212,716	
Cash Inflows																
Catfish sales	$	0.70	lb	0	0	1,653,750	0	2,911,650	0	0	2,772,000	0	0	1,757,700		9,095,100
TOTAL CASH INFLOW				10,895,121	10,761,010	12,376,781	#########	14,489,780	14,366,590	14,296,150	16,742,610	16,615,237	16,568,204	18,288,188	18,212,716	
Operating Expenses																
Feed, food fish	$	280	ton	15,540	16,800	126,840	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	3,577,980
Labor																
Farm manager	$	95,000	year	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	95,000
Hired laborer	$	299,500	week	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	299,500
Fingerlings, 5" (4"-6" range)	$	0.05	each			562,500										562,500
Harvest /1																
Seining	$	-	lb.	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	$	0.015	per lb	-	-	35,438	-	62,393	-	-	59,400	-	-	37,665	-	194,895
Fuel & lubricants																
Diesel																
- PTO-driven aeration	$	1.05	gallon						11,246	11,246						22,491
- Mowing	$	1.05	gallon			120	120	120	120	120	120	120	120			958
Gasoline																
- Transportation	$	1.25	gallon	781	781	781	781	781	781	781	781	781	781	781	781	9,375
- Boat and harvesting	$	1.25	gallon			75		75			75			75		300
Utilities																
Aeration + Meter charge		$0.932	kw-hr	175	175	175	332	1,483	2,888	3,395	3,276	1,293	292	177	175	13,836
Water pumping to flush ponds		$55.44	/3ac-ft/yr					8,316	16,632	24,948	24,948	8,316				83,160
Repairs and Maintenance	$	38,277	year	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	38,277
Telephone	$	2,500	year	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Accounting/legal	$	2,400	year	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Bird chasing	$	2,000	year	500	500	250								250	500	2,000
Chemicals																
Salt	$	53	ton			79,500										79,500
Diuron, off-flavor control	$	9	trt/acre						2,250	9,000	2,250					13,500
Copper sulfate, trematode treat.	$	9	acre					13,500								13,500
Supplies & admin.	$	600	year	50	50	50	50	50	50	50	50	50	50	50	50	600
Taxes (except income)	$	30.36	year	-	-	-	45,533	-	-	-	-	-	-	-	-	45,533
Insurance	$	6.25	acre	9,375												
Total Cash Operating Expenses				47,354	37,979	715,362	83,289	123,191	70,440	86,012	127,373	47,033	37,716	75,471	37,979	1,489,200
Scheduled debt payments																
Intermediate - principal				61,460	-	-	-	-	-	-	-	-	-	-	-	61,460
interest				25,296												
Long-term - principal										60,330						
interest										179,198						
TOTAL CASH OUTFLOW				134,111	37,979	715,362	83,289	123,191	70,440	325,540	127,373	47,033	37,716	75,471	37,979	1,550,660
CASH AVAILABLE				10,761,010	10,723,031	11,661,419	#########	14,366,590	14,296,150	13,970,610	16,615,237	16,568,204	16,530,488	18,212,716	18,174,737	
New Borrowing				-	-	-	-	-	-	-	-	-	-	-	-	
Payment on																
Principal								-					-			
Interest								-					-			
ENDING CASH BALANCE				10,761,010	10,723,031	11,661,419	#########	14,366,590	14,296,150	13,970,610	16,615,237	16,568,204	16,530,488	18,212,716	18,174,737	
Summary of Debt Outstanding:																
Short-term				-	-	-	-	-	-	-	-	-	-	-	-	
Intermediate-term				219,606	219,606	219,606	219,606	219,606	219,606	219,606	219,606	219,606	219,606	219,606	219,606	
Long-term				1,991,088	1,991,088	1,991,088	1,991,088	1,991,088	1,991,088	1,930,758	1,930,758	1,930,758	1,930,758	1,930,758	1,930,758	
TOTAL DEBT OUTSTANDING				2,210,693	2,210,693	2,210,693	2,210,693	2,210,693	2,210,693	2,150,363	2,150,363	2,150,363	2,150,363	2,150,363	2,150,363	

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.

Cash flow, Year 5, for a 250-acre catfish farm in the Delta, Mississippi, 2001.

Month				Jan-05	Feb-05	Mar-05	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Total
Fish sales (lb)				0	0	2,362,500	0	4,159,500	0	0	3,960,000	0	-	2,511,000	0	12,993,000
BEGINNING CASH BALANCE				18,174,737	18,040,627	18,002,647	18,941,036	18,903,280	21,691,739	21,621,300	21,295,760	23,940,387	23,893,354	23,855,637	25,537,866	
Cash Inflows																
Catfish sales	$	0.70	lb	0	0	1,653,750	0	2,911,650	0	0	2,772,000	0	0	1,757,700		9,095,100
TOTAL CASH INFLOW				18,174,737	18,040,627	19,656,397	18,941,036	21,814,930	21,691,739	21,621,300	24,067,760	23,940,387	23,893,354	25,613,337	25,537,866	
Operating Expenses																
Feed, food fish	$	280	ton	15,540	16,800	126,840	342,300	456,120	406,980	619,920	594,720	538,860	436,380	11,760	11,760	3,577,980
Labor																
Farm manager	$	95,000	year	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	7,917	95,000
Hired laborer	$	299,500	week	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	24,958	299,500
Fingerlings, 5" (4"-6" range)	$	0.05	each			562,500										562,500
Harvest /1																
Seining	$	-	lb.	-	-	-	-	-	-	-	-	-	-	-	-	-
Transport	$	0.015	per lb	-	-	35,438	-	62,393	-	-	59,400	-	-	37,665	-	194,895
Fuel & lubricants																
Diesel																
- PTO-driven aeration	$	1.05	gallon						11,246	11,246						22,491
- Mowing	$	1.05	gallon			120	120	120	120	120	120	120	120			958
Gasoline																
- Transportation	$	1.25	gallon	781	781	781	781	781	781	781	781	781	781	781	781	9,375
- Boat and harvesting	$	1.25	gallon			75		75			75			75		300
Utilities																
Aeration + Meter charge		$0.932	kw-hr	175	175	175	332	1,483	2,888	3,395	3,276	1,293	292	177	175	13,836
Water pumping to flush ponds		$55.44	/3ac-ft/yr					8,316	16,632	24,948	24,948	8,316				83,160
Repairs and Maintenance	$	38,277	year	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	3,190	38,277
Telephone	$	2,500	year	208	208	208	208	208	208	208	208	208	208	208	208	2,500
Accounting/legal	$	2,400	year	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Bird chasing	$	2,000	year	500	500	250								250	500	2,000
Chemicals																
Salt	$	53	ton			79,500										79,500
Diuron, off-flavor control	$	9	trt/acre						2,250	9,000	2,250					13,500
Copper sulfate, trematode treat.	$	9	acre					13,500								13,500
Supplies & admin.	$	600	year	50	50	50	50	50	50	50	50	50	50	50	50	600
Taxes (except income)			year	-	-	-	-	-	-	-	-	-	-	-	-	-
Insurance	$	6.25	acre	9,375												9,375
Total Cash Operating Expenses				47,354	37,979	715,362	37,756	123,191	70,440	86,012	127,373	47,033	37,716	75,471	37,979	1,443,666
Scheduled debt payments																
Intermediate - principal				66,992	-	-	-	-	-	-	-	-	-	-	-	66,992
interest				19,765												
Long-term - principal										65,759						
interest										173,768						
TOTAL CASH OUTFLOW				134,111	37,979	715,362	37,756	123,191	70,440	325,540	127,373	47,033	37,716	75,471	37,979	1,510,658
CASH AVAILABLE				18,040,627	18,002,647	18,941,036	18,903,280	21,691,739	21,621,300	21,295,760	23,940,387	23,893,354	23,855,637	25,537,866	25,499,887	
New Borrowing				-	-	-	-	-	-	-	-	-	-	-	-	
Payment on																
Principal								-					-			
Interest								-					-			
ENDING CASH BALANCE				18,040,627	18,002,647	18,941,036	18,903,280	21,691,739	21,621,300	21,295,760	23,940,387	23,893,354	23,855,637	25,537,866	25,499,887	
Summary of Debt Outstanding:																
Short-term				-	-	-	-	-	-	-	-	-	-	-	-	
Intermediate-term				152,614	152,614	152,614	152,614	152,614	152,614	152,614	152,614	152,614	152,614	152,614	152,614	
Long-term				1,930,758	1,930,758	1,930,758	1,930,758	1,930,758	1,930,758	1,864,998	1,864,998	1,864,998	1,864,998	1,864,998	1,864,998	
TOTAL DEBT OUTSTANDING				2,083,372	2,083,372	2,083,372	2,083,372	2,083,372	2,083,372	2,017,612	2,017,612	2,017,612	2,017,612	2,017,612	2,017,612	

/1 At this size operation on-farm labor will do the harvesting and only transportation costs apply.

Macros:
New_rows (Command-Option-r) inserts additional rows onto template

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
2,143,800	9.00%	19	1	7/1/2001

Periodic Payment:	Number of payments:
239,528	19

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
1	Jul-01	2,143,800	239,528	192,942	46,586	2,097,214	192,942
2	Jul-02	2,097,214	239,528	188,749	50,778	2,046,436	381,691
3	Jul-03	2,046,436	239,528	184,179	55,348	1,991,088	565,871
4	Jul-04	1,991,088	239,528	179,198	60,330	1,930,758	745,068
5	Jul-05	1,930,758	239,528	173,768	65,759	1,864,998	918,837
6	Jul-06	1,864,998	239,528	167,850	71,678	1,793,321	1,086,686
7	Jul-07	1,793,321	239,528	161,399	78,129	1,715,192	1,248,085
8	Jul-08	1,715,192	239,528	154,367	85,160	1,630,031	1,402,453
9	Jul-09	1,630,031	239,528	146,703	92,825	1,537,206	1,549,155
10	Jul-10	1,537,206	239,528	138,349	101,179	1,436,027	1,687,504
11	Jul-11	1,436,027	239,528	129,242	110,285	1,325,742	1,816,746
12	Jul-12	1,325,742	239,528	119,317	120,211	1,205,531	1,936,063
13	Jul-13	1,205,531	239,528	108,498	131,030	1,074,502	2,044,561
14	Jul-14	1,074,502	239,528	96,705	142,823	931,679	2,141,266
15	Jul-15	931,679	239,528	83,851	155,677	776,003	2,225,117
16	Jul-16	776,003	239,528	69,840	169,687	606,315	2,294,958
17	Jul-17	606,315	239,528	54,568	184,959	421,356	2,349,526
18	Jul-18	421,356	239,528	37,922	201,606	219,750	2,387,448
19	Jul-19	219,750	239,528	19,778	219,750	0	2,407,225
20	Jul-20	0	239,528	0	239,528	-239,528	2,407,225
21	Jul-21	0	239,528	0	239,528	-239,528	2,407,225
22	Jul-22	0	239,528	0	239,528	-239,528	2,407,225
23	Jul-23	0	239,528	0	239,528	-239,528	2,407,225
24	Jul-24	0	239,528	0	239,528	-239,528	2,407,225
25	Jul-25	0	239,528	0	239,528	-239,528	2,407,225
26	Jul-26	0	239,528	0	239,528	-239,528	2,407,225
27	Jul-27	0	239,528	0	239,528	-239,528	2,407,225
28	Jul-28	0	239,528	0	239,528	-239,528	2,407,225
29	Jul-29	0	239,528	0	239,528	-239,528	2,407,225
30	Jul-30	0	239,528	0	239,528	-239,528	2,407,225
31	Jul-31	0	239,528	0	239,528	-239,528	2,407,225
32	Jul-32	0	239,528	0	239,528	-239,528	2,407,225
33	Jul-33	0	239,528	0	239,528	-239,528	2,407,225
34	Jul-34	0	239,528	0	239,528	-239,528	2,407,225
35	Jul-35	0	239,528	0	239,528	-239,528	2,407,225
36	Jul-36	0	239,528	0	239,528	-239,528	2,407,225
37	Jul-37	0	239,528	0	239,528	-239,528	2,407,225
38	Jul-38	0	239,528	0	239,528	-239,528	2,407,225
39	Jul-39	0	239,528	0	239,528	-239,528	2,407,225
40	Jul-40	0	239,528	0	239,528	-239,528	2,407,225
41	Jul-41	0	239,528	0	239,528	-239,528	2,407,225
42	Jul-42	0	239,528	0	239,528	-239,528	2,407,225
43	Jul-43	0	239,528	0	239,528	-239,528	2,407,225

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
2,143,800	9.00%	19	1	7/1/2001

Periodic Payment:	Number of payments:
239,528	19

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
44	Jul-44	0	239,528	0	239,528	-239,528	2,407,225
45	Jul-45	0	239,528	0	239,528	-239,528	2,407,225
46	Jul-46	0	239,528	0	239,528	-239,528	2,407,225
47	Jul-47	0	239,528	0	239,528	-239,528	2,407,225
48	Jul-48	0	239,528	0	239,528	-239,528	2,407,225
49	Jul-49	0	239,528	0	239,528	-239,528	2,407,225
50	Jul-50	0	239,528	0	239,528	-239,528	2,407,225
51	Jul-51	0	239,528	0	239,528	-239,528	2,407,225
52	Jul-52	0	239,528	0	239,528	-239,528	2,407,225
53	Jul-53	0	239,528	0	239,528	-239,528	2,407,225
54	Jul-54	0	239,528	0	239,528	-239,528	2,407,225
55	Jul-55	0	239,528	0	239,528	-239,528	2,407,225
56	Jul-56	0	239,528	0	239,528	-239,528	2,407,225
57	Jul-57	0	239,528	0	239,528	-239,528	2,407,225
58	Jul-58	0	239,528	0	239,528	-239,528	2,407,225
59	Jul-59	0	239,528	0	239,528	-239,528	2,407,225
60	Jul-60	0	239,528	0	239,528	-239,528	2,407,225
61	Jul-61	0	239,528	0	239,528	-239,528	2,407,225
62	Jul-62	0	239,528	0	239,528	-239,528	2,407,225
63	Jul-63	0	239,528	0	239,528	-239,528	2,407,225
64	Jul-64	0	239,528	0	239,528	-239,528	2,407,225
65	Jul-65	0	239,528	0	239,528	-239,528	2,407,225
66	Jul-66	0	239,528	0	239,528	-239,528	2,407,225
67	Jul-67	0	239,528	0	239,528	-239,528	2,407,225
68	Jul-68	0	239,528	0	239,528	-239,528	2,407,225
69	Jul-69	0	239,528	0	239,528	-239,528	2,407,225
70	Jul-70	0	239,528	0	239,528	-239,528	2,407,225
71	Jul-71	0	239,528	0	239,528	-239,528	2,407,225
72	Jul-72	0	239,528	0	239,528	-239,528	2,407,225
73	Jul-73	0	239,528	0	239,528	-239,528	2,407,225
74	Jul-74	0	239,528	0	239,528	-239,528	2,407,225
75	Jul-75	0	239,528	0	239,528	-239,528	2,407,225
76	Jul-76	0	239,528	0	239,528	-239,528	2,407,225
77	Jul-77	0	239,528	0	239,528	-239,528	2,407,225
78	Jul-78	0	239,528	0	239,528	-239,528	2,407,225
79	Jul-79	0	239,528	0	239,528	-239,528	2,407,225
80	Jul-80	0	239,528	0	239,528	-239,528	2,407,225
81	Jul-81	0	239,528	0	239,528	-239,528	2,407,225
82	Jul-82	0	239,528	0	239,528	-239,528	2,407,225
83	Jul-83	0	239,528	0	239,528	-239,528	2,407,225
84	Jul-84	0	239,528	0	239,528	-239,528	2,407,225
85	Jul-85	0	239,528	0	239,528	-239,528	2,407,225
86	Jul-86	0	239,528	0	239,528	-239,528	2,407,225
87	Jul-87	0	239,528	0	239,528	-239,528	2,407,225
88	Jul-88	0	239,528	0	239,528	-239,528	2,407,225
89	Jul-89	0	239,528	0	239,528	-239,528	2,407,225

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
2,143,800	9.00%	19	1	7/1/2001

Periodic Payment:	Number of payments:
239,528	19

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
90	Jul-90	0	239,528	0	239,528	-239,528	2,407,225
91	Jul-91	0	239,528	0	239,528	-239,528	2,407,225
92	Jul-92	0	239,528	0	239,528	-239,528	2,407,225
93	Jul-93	0	239,528	0	239,528	-239,528	2,407,225
94	Jul-94	0	239,528	0	239,528	-239,528	2,407,225
95	Jul-95	0	239,528	0	239,528	-239,528	2,407,225
96	Jul-96	0	239,528	0	239,528	-239,528	2,407,225
97	Jul-97	0	239,528	0	239,528	-239,528	2,407,225
98	Jul-98	0	239,528	0	239,528	-239,528	2,407,225
99	Jul-99	0	239,528	0	239,528	-239,528	2,407,225
100	Jul-00	0	239,528	0	239,528	-239,528	2,407,225

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Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
436,640	9.00%	7	1	1/1/2001

Periodic Payment:	Number of payments:
86,756	7

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
1	Jan-01	436,640	86,756	39,298	47,459	389,181	39,298
2	Jan-02	389,181	86,756	35,026	51,730	337,451	74,324
3	Jan-03	337,451	86,756	30,371	56,386	281,066	104,695
4	Jan-04	281,066	86,756	25,296	61,460	219,606	129,990
5	Jan-05	219,606	86,756	19,765	66,992	152,614	149,755
6	Jan-06	152,614	86,756	13,735	73,021	79,593	163,490
7	Jan-07	79,593	86,756	7,163	79,593	0	170,654
8	Jan-08	0	86,756	0	86,756	-86,756	170,654
9	Jan-09	0	86,756	0	86,756	-86,756	170,654
10	Jan-10	0	86,756	0	86,756	-86,756	170,654
11	Jan-11	0	86,756	0	86,756	-86,756	170,654
12	Jan-12	0	86,756	0	86,756	-86,756	170,654
13	Jan-13	0	86,756	0	86,756	-86,756	170,654
14	Jan-14	0	86,756	0	86,756	-86,756	170,654
15	Jan-15	0	86,756	0	86,756	-86,756	170,654
16	Jan-16	0	86,756	0	86,756	-86,756	170,654
17	Jan-17	0	86,756	0	86,756	-86,756	170,654
18	Jan-18	0	86,756	0	86,756	-86,756	170,654
19	Jan-19	0	86,756	0	86,756	-86,756	170,654
20	Jan-20	0	86,756	0	86,756	-86,756	170,654
21	Jan-21	0	86,756	0	86,756	-86,756	170,654
22	Jan-22	0	86,756	0	86,756	-86,756	170,654
23	Jan-23	0	86,756	0	86,756	-86,756	170,654
24	Jan-24	0	86,756	0	86,756	-86,756	170,654
25	Jan-25	0	86,756	0	86,756	-86,756	170,654
26	Jan-26	0	86,756	0	86,756	-86,756	170,654
27	Jan-27	0	86,756	0	86,756	-86,756	170,654
28	Jan-28	0	86,756	0	86,756	-86,756	170,654
29	Jan-29	0	86,756	0	86,756	-86,756	170,654
30	Jan-30	0	86,756	0	86,756	-86,756	170,654
31	Jan-31	0	86,756	0	86,756	-86,756	170,654
32	Jan-32	0	86,756	0	86,756	-86,756	170,654
33	Jan-33	0	86,756	0	86,756	-86,756	170,654
34	Jan-34	0	86,756	0	86,756	-86,756	170,654
35	Jan-35	0	86,756	0	86,756	-86,756	170,654
36	Jan-36	0	86,756	0	86,756	-86,756	170,654
37	Jan-37	0	86,756	0	86,756	-86,756	170,654
38	Jan-38	0	86,756	0	86,756	-86,756	170,654
39	Jan-39	0	86,756	0	86,756	-86,756	170,654
40	Jan-40	0	86,756	0	86,756	-86,756	170,654
41	Jan-41	0	86,756	0	86,756	-86,756	170,654
42	Jan-42	0	86,756	0	86,756	-86,756	170,654
43	Jan-43	0	86,756	0	86,756	-86,756	170,654

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
436,640	9.00%	7	1	1/1/2001

Periodic Payment:	Number of payments:
86,756	7

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
44	Jan-44	0	86,756	0	86,756	-86,756	170,654
45	Jan-45	0	86,756	0	86,756	-86,756	170,654
46	Jan-46	0	86,756	0	86,756	-86,756	170,654
47	Jan-47	0	86,756	0	86,756	-86,756	170,654
48	Jan-48	0	86,756	0	86,756	-86,756	170,654
49	Jan-49	0	86,756	0	86,756	-86,756	170,654
50	Jan-50	0	86,756	0	86,756	-86,756	170,654
51	Jan-51	0	86,756	0	86,756	-86,756	170,654
52	Jan-52	0	86,756	0	86,756	-86,756	170,654
53	Jan-53	0	86,756	0	86,756	-86,756	170,654
54	Jan-54	0	86,756	0	86,756	-86,756	170,654
55	Jan-55	0	86,756	0	86,756	-86,756	170,654
56	Jan-56	0	86,756	0	86,756	-86,756	170,654
57	Jan-57	0	86,756	0	86,756	-86,756	170,654
58	Jan-58	0	86,756	0	86,756	-86,756	170,654
59	Jan-59	0	86,756	0	86,756	-86,756	170,654
60	Jan-60	0	86,756	0	86,756	-86,756	170,654
61	Jan-61	0	86,756	0	86,756	-86,756	170,654
62	Jan-62	0	86,756	0	86,756	-86,756	170,654
63	Jan-63	0	86,756	0	86,756	-86,756	170,654
64	Jan-64	0	86,756	0	86,756	-86,756	170,654
65	Jan-65	0	86,756	0	86,756	-86,756	170,654
66	Jan-66	0	86,756	0	86,756	-86,756	170,654
67	Jan-67	0	86,756	0	86,756	-86,756	170,654
68	Jan-68	0	86,756	0	86,756	-86,756	170,654
69	Jan-69	0	86,756	0	86,756	-86,756	170,654
70	Jan-70	0	86,756	0	86,756	-86,756	170,654
71	Jan-71	0	86,756	0	86,756	-86,756	170,654
72	Jan-72	0	86,756	0	86,756	-86,756	170,654
73	Jan-73	0	86,756	0	86,756	-86,756	170,654
74	Jan-74	0	86,756	0	86,756	-86,756	170,654
75	Jan-75	0	86,756	0	86,756	-86,756	170,654
76	Jan-76	0	86,756	0	86,756	-86,756	170,654
77	Jan-77	0	86,756	0	86,756	-86,756	170,654
78	Jan-78	0	86,756	0	86,756	-86,756	170,654
79	Jan-79	0	86,756	0	86,756	-86,756	170,654
80	Jan-80	0	86,756	0	86,756	-86,756	170,654
81	Jan-81	0	86,756	0	86,756	-86,756	170,654
82	Jan-82	0	86,756	0	86,756	-86,756	170,654
83	Jan-83	0	86,756	0	86,756	-86,756	170,654
84	Jan-84	0	86,756	0	86,756	-86,756	170,654
85	Jan-85	0	86,756	0	86,756	-86,756	170,654
86	Jan-86	0	86,756	0	86,756	-86,756	170,654
87	Jan-87	0	86,756	0	86,756	-86,756	170,654
88	Jan-88	0	86,756	0	86,756	-86,756	170,654
89	Jan-89	0	86,756	0	86,756	-86,756	170,654

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
436,640	9.00%	7	1	1/1/2001

Periodic Payment:	Number of payments:
86,756	7

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
90	Jan-90	0	86,756	0	86,756	-86,756	170,654
91	Jan-91	0	86,756	0	86,756	-86,756	170,654
92	Jan-92	0	86,756	0	86,756	-86,756	170,654
93	Jan-93	0	86,756	0	86,756	-86,756	170,654
94	Jan-94	0	86,756	0	86,756	-86,756	170,654
95	Jan-95	0	86,756	0	86,756	-86,756	170,654
96	Jan-96	0	86,756	0	86,756	-86,756	170,654
97	Jan-97	0	86,756	0	86,756	-86,756	170,654
98	Jan-98	0	86,756	0	86,756	-86,756	170,654
99	Jan-99	0	86,756	0	86,756	-86,756	170,654
100	Jan-00	0	86,756	0	86,756	-86,756	170,654

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New_rows (Command-Option-r) inserts additional rows onto template

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
175,000	9.00%	1	1	8/1/2000

Periodic Payment:	Number of payments:
190,750	1

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
1	Aug-00	175,000	190,750	15,750	175,000	0	15,750
2	Aug-01	0	190,750	0	190,750	-190,750	15,750
3	Aug-02	0	190,750	0	190,750	-190,750	15,750
4	Aug-03	0	190,750	0	190,750	-190,750	15,750
5	Aug-04	0	190,750	0	190,750	-190,750	15,750
6	Aug-05	0	190,750	0	190,750	-190,750	15,750
7	Aug-06	0	190,750	0	190,750	-190,750	15,750
8	Aug-07	0	190,750	0	190,750	-190,750	15,750
9	Aug-08	0	190,750	0	190,750	-190,750	15,750
10	Aug-09	0	190,750	0	190,750	-190,750	15,750
11	Aug-10	0	190,750	0	190,750	-190,750	15,750
12	Aug-11	0	190,750	0	190,750	-190,750	15,750
13	Aug-12	0	190,750	0	190,750	-190,750	15,750
14	Aug-13	0	190,750	0	190,750	-190,750	15,750
15	Aug-14	0	190,750	0	190,750	-190,750	15,750
16	Aug-15	0	190,750	0	190,750	-190,750	15,750
17	Aug-16	0	190,750	0	190,750	-190,750	15,750
18	Aug-17	0	190,750	0	190,750	-190,750	15,750
19	Aug-18	0	190,750	0	190,750	-190,750	15,750
20	Aug-19	0	190,750	0	190,750	-190,750	15,750
21	Aug-20	0	190,750	0	190,750	-190,750	15,750
22	Aug-21	0	190,750	0	190,750	-190,750	15,750
23	Aug-22	0	190,750	0	190,750	-190,750	15,750
24	Aug-23	0	190,750	0	190,750	-190,750	15,750
25	Aug-24	0	190,750	0	190,750	-190,750	15,750
26	Aug-25	0	190,750	0	190,750	-190,750	15,750
27	Aug-26	0	190,750	0	190,750	-190,750	15,750
28	Aug-27	0	190,750	0	190,750	-190,750	15,750
29	Aug-28	0	190,750	0	190,750	-190,750	15,750
30	Aug-29	0	190,750	0	190,750	-190,750	15,750
31	Aug-30	0	190,750	0	190,750	-190,750	15,750
32	Aug-31	0	190,750	0	190,750	-190,750	15,750
33	Aug-32	0	190,750	0	190,750	-190,750	15,750
34	Aug-33	0	190,750	0	190,750	-190,750	15,750
35	Aug-34	0	190,750	0	190,750	-190,750	15,750
36	Aug-35	0	190,750	0	190,750	-190,750	15,750
37	Aug-36	0	190,750	0	190,750	-190,750	15,750
38	Aug-37	0	190,750	0	190,750	-190,750	15,750
39	Aug-38	0	190,750	0	190,750	-190,750	15,750
40	Aug-39	0	190,750	0	190,750	-190,750	15,750
41	Aug-40	0	190,750	0	190,750	-190,750	15,750
42	Aug-41	0	190,750	0	190,750	-190,750	15,750
43	Aug-42	0	190,750	0	190,750	-190,750	15,750

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
175,000	9.00%	1	1	8/1/2000

Periodic Payment:	Number of payments:
190,750	1

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
44	Aug-43	0	190,750	0	190,750	-190,750	15,750
45	Aug-44	0	190,750	0	190,750	-190,750	15,750
46	Aug-45	0	190,750	0	190,750	-190,750	15,750
47	Aug-46	0	190,750	0	190,750	-190,750	15,750
48	Aug-47	0	190,750	0	190,750	-190,750	15,750
49	Aug-48	0	190,750	0	190,750	-190,750	15,750
50	Aug-49	0	190,750	0	190,750	-190,750	15,750
51	Aug-50	0	190,750	0	190,750	-190,750	15,750
52	Aug-51	0	190,750	0	190,750	-190,750	15,750
53	Aug-52	0	190,750	0	190,750	-190,750	15,750
54	Aug-53	0	190,750	0	190,750	-190,750	15,750
55	Aug-54	0	190,750	0	190,750	-190,750	15,750
56	Aug-55	0	190,750	0	190,750	-190,750	15,750
57	Aug-56	0	190,750	0	190,750	-190,750	15,750
58	Aug-57	0	190,750	0	190,750	-190,750	15,750
59	Aug-58	0	190,750	0	190,750	-190,750	15,750
60	Aug-59	0	190,750	0	190,750	-190,750	15,750
61	Aug-60	0	190,750	0	190,750	-190,750	15,750
62	Aug-61	0	190,750	0	190,750	-190,750	15,750
63	Aug-62	0	190,750	0	190,750	-190,750	15,750
64	Aug-63	0	190,750	0	190,750	-190,750	15,750
65	Aug-64	0	190,750	0	190,750	-190,750	15,750
66	Aug-65	0	190,750	0	190,750	-190,750	15,750
67	Aug-66	0	190,750	0	190,750	-190,750	15,750
68	Aug-67	0	190,750	0	190,750	-190,750	15,750
69	Aug-68	0	190,750	0	190,750	-190,750	15,750
70	Aug-69	0	190,750	0	190,750	-190,750	15,750
71	Aug-70	0	190,750	0	190,750	-190,750	15,750
72	Aug-71	0	190,750	0	190,750	-190,750	15,750
73	Aug-72	0	190,750	0	190,750	-190,750	15,750
74	Aug-73	0	190,750	0	190,750	-190,750	15,750
75	Aug-74	0	190,750	0	190,750	-190,750	15,750
76	Aug-75	0	190,750	0	190,750	-190,750	15,750
77	Aug-76	0	190,750	0	190,750	-190,750	15,750
78	Aug-77	0	190,750	0	190,750	-190,750	15,750
79	Aug-78	0	190,750	0	190,750	-190,750	15,750
80	Aug-79	0	190,750	0	190,750	-190,750	15,750
81	Aug-80	0	190,750	0	190,750	-190,750	15,750
82	Aug-81	0	190,750	0	190,750	-190,750	15,750
83	Aug-82	0	190,750	0	190,750	-190,750	15,750
84	Aug-83	0	190,750	0	190,750	-190,750	15,750
85	Aug-84	0	190,750	0	190,750	-190,750	15,750
86	Aug-85	0	190,750	0	190,750	-190,750	15,750
87	Aug-86	0	190,750	0	190,750	-190,750	15,750
88	Aug-87	0	190,750	0	190,750	-190,750	15,750
89	Aug-88	0	190,750	0	190,750	-190,750	15,750

Principal:	Annual interest rate:	Term (years):	Periods per year:	Start date:
175,000	9.00%	1	1	8/1/2000

Periodic Payment:	Number of payments:
190,750	1

Payment No	Month	Beginning balance	Total payment	Interest	Principal	Ending balance	Cumulative interest
90	Aug-89	0	190,750	0	190,750	-190,750	15,750
91	Aug-90	0	190,750	0	190,750	-190,750	15,750
92	Aug-91	0	190,750	0	190,750	-190,750	15,750
93	Aug-92	0	190,750	0	190,750	-190,750	15,750
94	Aug-93	0	190,750	0	190,750	-190,750	15,750
95	Aug-94	0	190,750	0	190,750	-190,750	15,750
96	Aug-95	0	190,750	0	190,750	-190,750	15,750
97	Aug-96	0	190,750	0	190,750	-190,750	15,750
98	Aug-97	0	190,750	0	190,750	-190,750	15,750
99	Aug-98	0	190,750	0	190,750	-190,750	15,750
100	Aug-99	0	190,750	0	190,750	-190,750	15,750