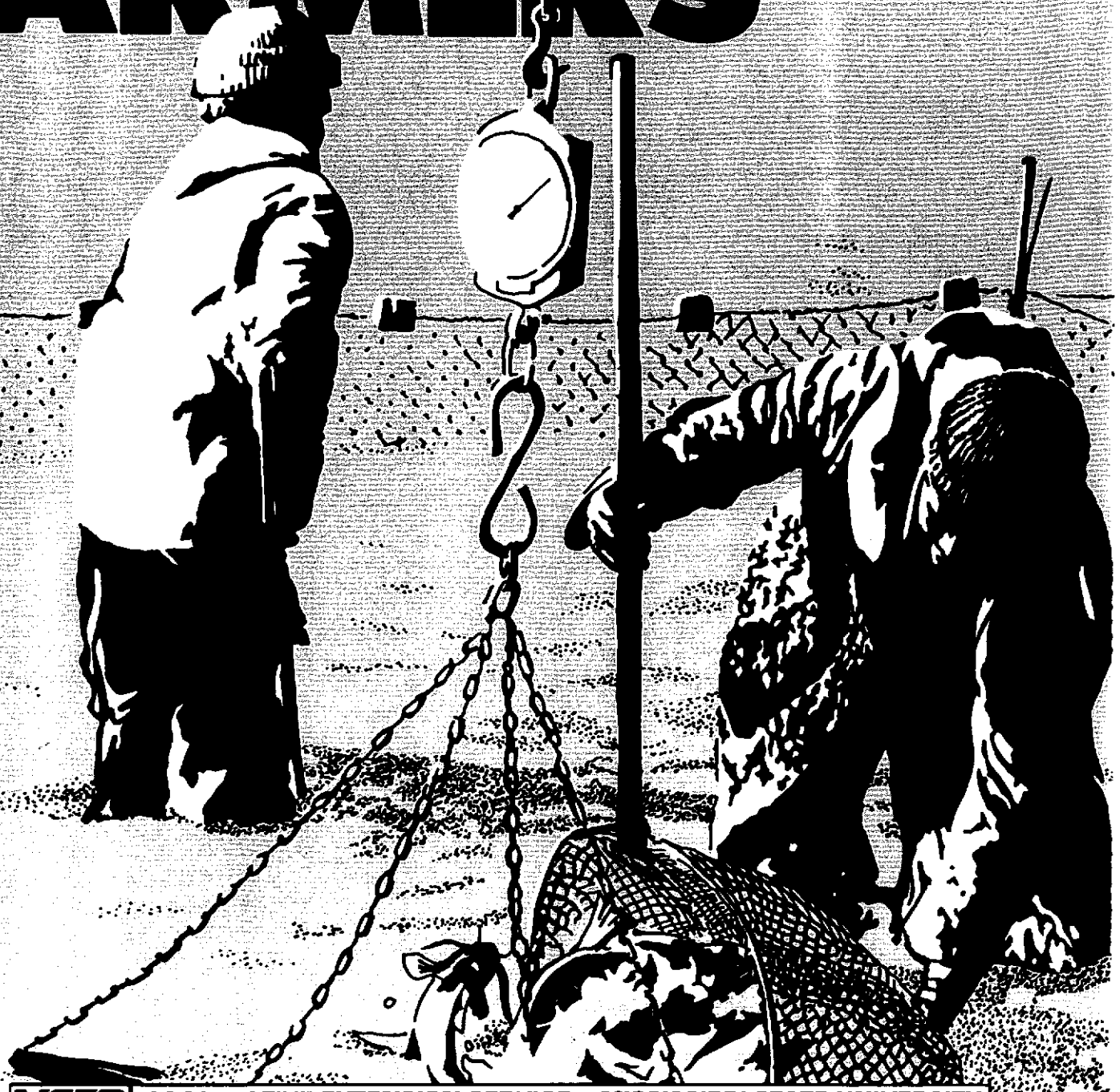


**Guide for**

# **PROSPECTIVE CATFISH FARMERS**










**MCES** COOPERATIVE EXTENSION SERVICE • MISSISSIPPI STATE UNIVERSITY

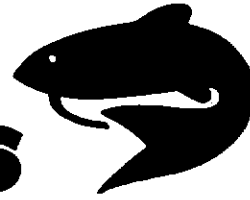
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# Guide for PROSPECTIVE CATFISH FARMERS



## THE DECISION

Catfish farming is much more than just stocking fish in a pond, feeding, and then reaping the profits. It is a very expensive and risky form of agriculture. Intensive catfish culture requires almost 24-hour a day management, and unless you are willing to provide this type of management, you should look at another enterprise.

To help you determine if intensive catfish farming is feasible for you in your particular situation, a checklist is provided below. It doesn't cover all of the possibilities, but it does list most of the important considerations. Answering "yes" to all or most of the questions does not guarantee success, just as answering "no" does not mean failure.

### Management

	Yes	No
Do you already have suitable ponds or a pond site?	___	___
Do you have most of the equipment (tractors, pumps, storage building, etc.) needed?	___	___
Do you have the necessary financial resources (about \$3000/acre investment and \$2500/acre annual production cost) needed?	___	___
Have you made an estimate of investment costs and annual cost and return?	___	___
Have you estimated the impact of changes in fish prices and feed costs on projected income?	___	___
Will current interest rates and interest costs on investment and operating capital permit a reasonable profit?	___	___
Will the expected profit provide an adequate return for your labor, management and risk?	___	___
Is catfish farming the best alternative for the land you intend to use?	___	___
Can you afford to forego income until you sell your first crop (usually 15-24 months after starting)?	___	___
Have you looked at record systems available and picked one best suited to your situation?	___	___
Can you afford to absorb occasional losses?	___	___
Are you willing to devote the time and effort required?	___	___

### Marketing

Do you know of an established market for your fish?	___	___
Is there a market for your fish at the time of year you plan to sell them?	___	___

Will you have harvesting and transport equipment, or do you have a suitable arrangement for harvesting your fish?	___	___
Will you be able to harvest fish year round?	___	___
Do you have an alternative marketing strategy?	___	___

### Physical Factors

Will the soil hold water?	___	___
Is the topography of the land suitable for pond construction?	___	___
Is there adequate ground water close enough to the surface for catfish farming?	___	___
Is the water quality suitable for fish farming?	___	___
Is the pond area protected from flooding?	___	___
Are the drains in existing ponds adequate for rapid draining?	___	___
Can you prevent wild fish from entering the pond?	___	___
Is there daily access to the ponds, regardless of weather, for feeding, treating, and harvesting?	___	___
Is the pond bottom suitable for harvesting (smooth and stump-free)?	___	___
Will someone live close enough to the pond to allow frequent observation and necessary management?	___	___

### Production

Are good quality feeds available at competitive prices?	___	___
Is there a source of supply for drugs and chemicals?	___	___
Are fingerlings available at competitive prices?	___	___
Can you make or purchase needed aeration equipment?	___	___
Is dependable labor available?	___	___
Is a dependable diagnostic service available?	___	___
Do you have adequate storage facilities for feed?	___	___
Are you aware of the government agencies that can provide you with educational and technical assistance?	___	___

### Risks

Are you prepared to handle these problems:		
Poor water quality?	___	___
Diseases?	___	___
Pesticide contamination?	___	___
Poachers and vandals?	___	___
Low fish prices and high feed costs?	___	___
Personal stress resulting from financial loss?	___	___



# THE INVESTMENT

The amount of investment required for catfish farming varies and depends on many factors. The following is a list of costs common to most catfish farms. Determine the approximate costs for your situation:

Capital Costs	Amount
1. land	_____
2. pond construction (about 6.2 cubic yds. per linear foot of levee for a 16 foot top), gravel, vegetation	_____
3. drains (pipe, valve, fittings)	_____
4. water supply	_____
5. building (storage and service)	_____
6. aeration equipment (paddlewheel, relift pumps, etc.)	_____
7. boat and motor	_____
8. trucks	_____
9. fish hauling tanks and agitators	_____
10. feeding equipment, feed storage bins	_____
11. tractors	_____
12. mowers	_____
13. oxygen testing equipment	_____
14. other water quality testing equipment	_____
15. seines, storage reels, crane	_____
16. dip nets	_____
17. waders and boots	_____
18. miscellaneous equipment	_____
19. taxes and insurance	_____
20. interest	_____

## Operating Costs

1. Feed	_____
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**Table 1. Cost of feed in cents to produce a 1 lb catfish at different feed conversions and prices.**

Feed Conversion	Cost per lb of feed (cost per ton in parentheses)					
	\$0.10 (\$200)	\$0.1125 (\$225)	\$0.125 (\$250)	\$0.1375 (\$275)	\$0.15 (\$300)	\$0.1625 (\$325)
1.5:1	15.0	16.9	18.8	20.6	22.5	24.4
1.6:1	16.0	18.0	20.0	22.0	24.0	26.0
1.7:1	17.0	19.1	21.3	23.4	25.5	27.6
1.8:1	18.0	20.3	22.5	24.8	27.0	29.3
1.9:1	19.0	21.4	23.4	26.1	28.5	30.9
2.0:1	20.0	22.5	25.0	27.5	30.0	32.5

2. fingerlings	_____
3. electricity	_____
4. fuel (diesel and gasoline)	_____
5. maintenance and repairs	_____
6. harvest labor	_____
7. transportation	_____
8. daily labor	_____
9. chemicals and drugs	_____
10. telephone	_____
11. miscellaneous	_____
12. interest on operating capital	_____

The best information on the economics of producing catfish are two publications available from your county agent:

*Mississippi Farm-Raised Catfish, January 1982 Cost of Production Estimates*, Mississippi State University, Agricultural Economics Research Report No. 134, Giachelli, Coats, and Waldrop.

*Cash Flows Associated with Farm-Raised Catfish Production*, Mississippi State University, Agricultural Economics Technical Publication No. 46, Giachelli, and Waldrop.



# SITE SELECTION

The selection of the site is a critical decision. Look for these characteristics in a potential site:

1. Soil must hold water.
2. Flat land requires moving about 1,000-1,200 yards of dirt per acre. Rolling land requires more dirt be moved and is, therefore, more expensive.
3. Lands classed as "wetlands" cannot be cleared by law. Wetlands are defined as, "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."
4. Site must be suitable for draining.
5. Land is not subject to flooding.
6. Pesticide residues are not present in soil.
7. Run-off is not from agricultural fields.
8. Adequate water is available to fill pond within 10-12 days. (See Table 2).

**Table 2. Time in hours required to pump different volumes of water in acre feet at four different pumping rates.**

Pumping Rate	Volume in Acre Feet*			
	1	5	10	70**
100 gpm	54.3	271.5	543.1	3802 (158)***
500 gpm	10.9	54.3	108.6	760 (31.6)***
1,000 gpm	5.4	27.0	54.3	380 (15.8)***
2,000 gpm	2.7	13.5	27.2	190 (7.9)***
3,000 gpm	1.8	9.0	18.1	127 (5.3)***

\* 1 acre foot = 325,850 gallons = 1 surface acre that is 1 foot deep.

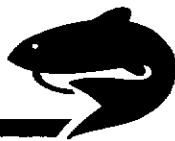
\*\* The number of acre feet of water in a pond with 17.5 surface acres with an average depth of 4 feet.

\*\*\* Number of days required to pump that volume of water.

9. If surface water is used, the watershed should be adequate for filling pond during normal rainfall.

## Pond Construction

1. Size - 17.5 water acres on 20 land acres; large ponds are more difficult to manage, and smaller ponds are more expensive to construct.
2. Slope bottom to drain by gravity flow (0.1-.2 ft. per 100 ft.)
3. The drain should be large enough so pond can be drained within 7-10 days. Drain outlet must be at least 2 feet above surface of water in drainage ditch to prevent wild fish from entering pond.
4. Levee width should be at least 16 feet with gravel.
5. Slope should be 3:1 with proper compaction.
6. Freeboard (the height of the levee above the water level) should not exceed 2 feet nor be less than 1 foot.
7. Depth should be at least 3 feet at the toe of slope at shallow end and should not exceed 6 feet at toe of slope at the deep end.
8. Shape of pond is determined by topography. A square 20-acre pond requires 1,867 feet of levee. A rectangular 20-acre pond that is 660 x 1,320 feet requires 1,980 feet of levee, a difference of 113 feet.



## PRODUCTION

When you get into the production phase of raising catfish, there are many important things you will have to know and remember. In this section we cover the major ones on the intensive culture of catfish with ground water available.

### Stocking

1. Do not exceed 3,000 to 3,500 per acre first growing season. This will permit your gaining experience in management while minimizing potential problems with disease and water quality.
2. Stock 4,500 per acre thereafter.
3. Use 6-8 inch fish if available since they will reach a harvestable size of 1.25 pounds in about 180-210 days when water temperatures are above 70°F (21°C).

**Table 3.** Average weight of channel catfish fingerlings for various lengths. These weights will vary considerably depending on condition of fish and when they were last fed.

Length in inches	Average weight per 1,000 fish in pounds	Number of fish per pound
1	1	1,000
2	3	333
3	7	143
4	19	53
5	34	29
6	60	17
7	94	11
8	140	7
9	190	5
10	280	4

Before stocking the pond, weigh and sample-count the fish so you can determine the number actually being stocked.

To determine number actually stocked, weigh out a sample of fish (1 to 10 lbs.) and count. Then calculate the total number of fish stocked with this formula:

$$\text{Number of fish stocked} = \frac{\text{number of fish in sample}}{\text{weight of fish in sample}} \times \text{total weight in lb stocked}$$

Where:

Number of fish in sample = 266

Weight of fish sample = 5 lb

Total weight of fish = 85.5 lb

$$\text{Thus, number stocked} = \frac{266 \text{ fish} \times 85.5 \text{ lb}}{5 \text{ lb}} = 4,548 \text{ fish}$$

To determine the weight of 1,000 fish, weigh and count sample of fish; then:

$$\text{Weight of 1000 fish} = \frac{\text{wt. of fish in sample in lb} \times 1000}{\text{number of fish in sample}}$$

5. Stock the pond as soon as water is in the pond and catfish are available.
6. When topping the pond, restock as soon after harvest as possible with one 5-8 inch fish for each fish harvested. Count a weighed sample of harvested fish, then calculate number harvested using the following formula:

Number harvested

$$= \frac{\text{number in sample} \times \text{total weight harvested}}{\text{weight of sample in pounds}}$$

Example:

Number in sample = 80 fish

Weight of sample = 100 lb

Total weight harvested = 10,000 lb

$$\text{thus, number of fish harvested} = \frac{80 \text{ fish} \times 10,000 \text{ lb}}{100 \text{ lb}}$$

Number of fish harvested = 8,000 fish

Therefore, since 8,000 fish (weighing a total of 10,000 lb) were harvested, you need to restock 8,000 fingerlings.

7. When all fish are harvested from a pond, restock the pond as soon as it is 1/4 to 1/2 full and stocker-size catfish are available.

### Feeding - remember "No Feed, No Gain"

1. Feed size - Match feed size to fish size.
2. Quality of feed - use complete feed with vitamins added. Above 65°F (18.3°C) use floating feed. Use sinking feed when water temperatures are lower.
3. Feeding rates - Several factors that control the amount of food fish will eat are: temperature, water quality (oxygen, pH, ammonia, etc.), food size, palatability or taste of food, frequency of feeding, the way the fish are fed, location of feeding sites, and whether floating or sinking pellets are used.

As a rule of thumb, feed 2 to 3 percent of the weight of the fish in pond daily when water temperatures are 65°F (18.3°C) or higher. Feed 1 percent of the body weight every other day when water temperatures are lower than 60°F (15.5°C). When water temperature is above 90°F feed intake is usually reduced.

Adjust amount fed every two weeks by obtaining a sample of fish from the pond, weighing the sample, and counting the number in the sample. Then use the following formula to calculate the weight of food to feed per acre daily for the next two weeks:

$$\text{Weight of feed needed daily per acre} = \frac{\text{wt. of sample} \times \text{no. stocked/acre} \times \% \text{ to feed}}{\text{number in sample}}$$

Example:

Weight of sample = 20 lb  
 Number in sample = 100 fish  
 Number stocked per acre = 4,500 fish  
 % to feed daily = 3%

$$\begin{aligned} \text{Weight of feed needed daily per acre} &= \frac{20 \text{ lb} \times 4,500 \text{ fish} \times 0.03}{100 \text{ fish}} \\ &= 27 \text{ lb feed needed/acre/day} \end{aligned}$$

Limit feeding to a maximum of 100 lb. per acre per day. Exceeding this rate can result in severe water quality problems that can be difficult to manage.

Tables 4-7 are guides to show the amount to feed based on average expected gains at stocking rates of 1,000 5- or 7-inch fingerlings per acre. If you have stocked 2,000 catfish per acre, multiply the amount to feed daily per acre by 2. If the pond was stocked with 3,500 per acre, multiply the amount to feed daily per acre by 3.5. **Remember these tables are guides only and the amount you feed daily depends on your particular situation and all factors which influence daily feed consumption by catfish.**

Winter feeding as a management practice cannot be overstressed.

Feed once daily in the morning as soon as water quality permits. According to recent research, afternoon feeding results in excess fat rather than protein in the form of muscle tissue.

Recordkeeping is a must for good management. You can develop your own system or use the forms in the appendix.

### Water Quality

1. One key to successful catfish farming is an adequate supply of suitable water. Here are some water sources:
  - Wells are most desirable because of year-round availability and uniform quality; they are also free of fish that can transmit disease.
  - Reservoirs or streams will work but can act as a source of wild fish, disease, and chemical contamination.

- Run-off is least desirable and not satisfactory for intensive culture since it is not available when needed. Can only refill pond during rainy season, thus restricting harvest time.

2. Be prepared to check water for:
  - Oxygen - daily (see "For Fish Farmers" No. 81-3 available from your county agent)
  - Ammonia - every 7-10 days
  - pH - when ammonia is present
  - Nitrites - every 2-3 days
  - Chlorides - when nitrites are present
  - Total Alkalinity - before using copper sulfate
 See "For Fish Farmers" No. 82-1 for testing procedures for ammonia, nitrite and chloride; available from your county agent.



## DISEASES AND TREATMENT

1. Observe fish daily to see the first sign of a disease. Signs that fish may be getting sick fall into two main categories:
  - Behavior - The way fish act, particularly a reduction in feeding activity, will often indicate the beginning of a disease.
  - Physical appearance - Check any abnormalities to see if a disease is starting.
2. Anything that prevents stress will reduce the chance of an infectious disease.
  - Oxygen - minimum of 4 ppm, maximum not to exceed 150 percent saturation for 4-6 hours.
  - Temperature - 33°F (0.6°C) to 120°F (48.9°C); don't exceed a rapid 10°F (5.6°C) increase or decrease.
  - pH - 4.5 to 10.5; best range is 6.5 to 9.0.
  - Nutrients - feed must contain all essential nutrients.
  - Proper handling.
  - Prevent toxins, natural or introduced, from entering pond.
  - Maintain good water quality by preventing buildup of nitrite, ammonia, etc.
3. Before treating fish for disease there are several things you need to know:
  - Prognosis.
  - Feasibility of treating in facility where fish are located.
  - Economics of treating.
  - Does loss rate warrant treatment?
4. Before deciding on treatment to use, you must know these things:
  - Water and how it will affect the treatment.
  - Fish and how they will respond to the treatment.
  - Chemical and its effectiveness in a particular situation.
  - Disease and how it will respond to the treatment selected.

5. Calculation of Treatment Levels - see Information Sheet 673 *Calculation of Treatment Levels for Control of Fish Diseases and Aquatic Weeds* available from your county agent.



### What To Do If Fish Get Sick

1. Submit sample of sick fish and water sample to the Extension Wildlife and Fisheries Department Fish Disease Laboratory at Mississippi State University (telephone 601/325-3174) or at Stoneville (601/686-9311) for a quick and accurate diagnosis. Select and ship samples according to instructions on Information Sheet 667 *Selection and Shipping Samples To Determine Cause of Fish Kill* available from your county agent.
2. If you suspect a fish kill is caused by a pesticide, contact the Division of Plant Industries at Mississippi State University (telephone 601/325-5713) in addition to collecting samples as indicated on Information Sheet 667.

### Off-Flavor

The only way to correct flavor problems is to put affected fish into clean water for 3 to 10 days.

### Control of Undesirable Fish

There are two ways to control undesirable fish:

1. Complete eradication of all fish either by
  - Drain and dry ponds.
  - Rotenone - Use 3 pounds of 5% rotenone powder or 6 pints of 2.5% emulsifiable rotenone per acre foot of water. Use only when water temperature is above 70°F (21.1°C).
2. Selective Removal of Scale Fish  
Fintrol (Antimycin A) - Legal to use. Used at 1/5 the recommended rate is satisfactory and economical. Use early in the morning when pH is less than 8.5 to reduce cost of treating.

### Aquatic Weed Control

- Have problem weed identified by county agent.
- Calculate pond area and volume to be treated.
- Choose most economical and effective control method.
- Follow label instructions.

## HARVESTING

You must decide whether to do your own harvesting or hire a custom harvester. If you do your own harvesting, the equipment and labor required depend on the number, size, and shape of your ponds.

- Basic equipment required: hydraulic-powered seine reel mounted on a 2-wheel trailer; 3 feet of seine for every 2 feet of pond width; should be 10 feet deep and have floats and mud line; 14 foot john boat with seine bracket on front and powered with a 10-25 h.p. motor; boom truck with hoist; in-line scales, and fish basket; 2 tractors with hydraulic system for pulling seine; cutting seines or live cars; dip nets, waders, gloves, etc.; emergency aeration equipment.
- Stretch the seine across one end and pull it by the tractors toward the end with the inflow pipe. It is necessary for two men to get in the water and move with the seine, using a foot to keep the mud line on the bottom.
- After fish are concentrated at one end, load the fish in the basket, hoist it up to the live-haul truck, record weight, and then put in hauling tank containing water.

If you decide to use custom harvesting, here are some things you need to know:

- Cost varies but is usually 3-5 cents per pound.
- Contact custom harvester well ahead of anticipated harvest for scheduling purposes and to determine cost.
- Be sure you have a market and fish are on-flavor.
- Find out what equipment you are expected to provide.

# APPENDIX

**Table 4. Feeding guide based on average expected gains with a feed conversion of 1.75 at a stocking rate of 1,000 5-inch fingerlings per acre.**

Dates	Water Temp. °F	Col. 1 Wt of 1,000 Fish at Beginning	Col. 2 % of Body Wt Fed Daily	Col. 3 Wt of Food Fed/Acre/Day 1,000 Fish	Col. 4 Conversion	Col. 5 Gain in Lb Per Day	Col. 6 No. of Feeding Days	Col. 7 Gain in Lb Per Period
3/15-31	55-60	34	1.0	0.3	1.75	0.2	17	3.4
4/1-15	60-65	37.4	1.5	0.6	1.75	0.3	15	4.5
4/16-30	65-70	41.9	2.0	0.8	1.75	0.5	15	7.5
5/1-15	70-75	49.4	2.5	1.2	1.75	0.7	15	10.5
5/16-31	75-80	59.9	3.0	1.8	1.75	1.0	16	16.0
6/1-15	80-85	75.9	3.0	2.3	1.75	1.3	15	19.5
6/16-30	85-90	95.4	3.0	2.9	1.75	1.7	15	25.5
7/1-15	90-95	120.9	3.0	3.6	1.75	2.1	15	30.9
7/16-31	90-95	151.8	3.0	4.6	1.75	2.6	16	41.6
8/1-15	90-100	193.4	3.0	5.8	1.75	3.3	15	49.5
8/16-31	90-95	242.9	3.0	7.3	1.75	4.2	16	67.2
9/1-15	85-90	310.1	3.0	9.3	1.75	5.3	15	79.5
9/16-30	75-85	389.6	3.0	11.7	1.75	6.7	15	100.5
10/1-15	65-75	490.1	2.5	12.3	1.75	7.0	15	105.0
10/16-31	60-65	595.1	2.0	11.9	1.75	6.8	16	108.8
11/1-15	55-60	703.9	1.5	10.6	1.75	6.1	15	91.5

Total Expected Weight of Fish = 795.4 lb  
Total Weight of Food Fed = 1331.2 lb

Method of calculating projected growth of fish during year:

- (1) Column 1 x Column 2 ÷ 100 = Column 3
- (2) Column 3 ÷ Column 4 = Column 5
- (3) Column 5 x Column 6 = Column 7
- (4) Column 7 + Column 1 = Column 1 next time period

**Table 5. Feeding guide based on average expected gains with a feed conversion of 1.5 at a stocking rate of 1,000 5-inch fingerlings per acre.**

Dates	Water Temp. °F	Col. 1 Wt of 1,000 Fish at Beginning	Col. 2 % of Body Wt Fed Daily	Col. 3 Wt of Food Fed/Acre/Day 1,000 Fish	Col. 4 Conversion	Col. 5 Gain in Lb Per Day	Col. 6 No. of Feeding Days	Col. 7 Gain in Lb Per Period
3/15-31	55-60	34.0	1.0	0.3	1.5	0.2	17	3.4
4/1-15	60-65	37.4	1.5	0.6	1.5	0.4	15	6.0
4/16-30	65-70	43.4	2.0	0.9	1.5	0.6	15	9.0
5/1-15	70-75	52.4	2.5	1.3	1.5	0.9	15	13.5
5/16-31	75-80	65.9	3.0	2.0	1.5	1.3	16	20.8
6/1-15	80-85	86.7	3.0	2.6	1.5	1.7	15	25.5
6/16-30	85-90	112.2	3.0	3.4	1.5	2.3	15	34.5
7/1-15	90-95	146.7	3.0	4.4	1.5	2.9	15	43.5
7/16-31	90-95	190.2	3.0	5.7	1.5	3.8	16	60.8
8/1-15	90-100	251.0	3.0	7.5	1.5	5.0	15	75.0
8/16-31	90-95	326.0	3.0	9.8	1.5	6.5	16	104.0
9/1-15	85-90	430.0	3.0	12.9	1.5	8.6	15	129.0
9/16-30	75-85	599.0	3.0	16.8	1.5	11.2	15	168.0
10/1-15	65-75	727.0	2.5	18.2	1.5	12.1	15	181.5
10/16-31	60-65	908.5	2.0	18.2	1.5	12.1	16	193.6
11/1-15	55-60	1102.1	1.5	16.5	1.5	11.0	15	165.0

Total Expected Weight of Fish = 1267.1 lb  
Total Weight of Food Fed = 1852.8 lb

Method of calculating projected growth of fish during year:

- (1) Column 1 x Column 2 ÷ 100 = Column 3
- (2) Column 3 ÷ Column 4 = Column 5
- (3) Column 5 x Column 6 = Column 7
- (4) Column 7 + Column 1 = Column 1 next time period



**Table 6. Feeding guide based on average expected gains with a feed conversion of 1.5 at a stocking rate of 1,000 7-inch fingerlings per acre.**

Dates	Water Temp. °F	Col. 1 Wt of 1,000 Fish at Beginning	Col. 2 % of Body Wt Fed Daily	Col. 3 Wt of Food Fed/Acre/Day 1,000 Fish	Col. 4 Conversion	Col. 5 Gain in Lb Per Day	Col. 6 No. of Feeding Days	Col. 7 Gain in Lb Per Period
3/15-31	55-60	94.0	1.0	0.9	1.5	0.6	17	10.2
4/1-15	60-55	104.2	1.5	1.6	1.5	1.1	15	16.5
4/16-30	65-70	120.7	2.0	2.4	1.5	1.6	15	24.0
5/1-15	70-75	144.7	2.5	3.6	1.5	2.4	15	36.0
5/16-31	75-80	180.7	3.0	5.4	1.5	3.6	16	57.6
6/1-15	80-85	238.3	3.0	7.1	1.5	4.7	15	70.5
6/16-30	85-90	308.8	3.0	9.3	1.5	6.2	15	93.0
7/1-15	90-95	401.8	3.0	12.1	1.5	8.1	15	121.5
7/16-31	90-95	523.3	3.0	15.7	1.5	10.5	16	168.0
8/1-15	90-100	691.3	3.0	20.0	1.5	13.3	15	199.5
8/16-31	90-95	890.8	2.5	20.0	1.5	13.3	16	212.8
9/1-15	85-90	1103.6	1.8	20.0	1.5	13.3	15	199.5
9/16-30	75-85	1303.1	1.5	20.0	1.5	13.3	15	199.5

Total Expected Weight of Fish = 1502.6 lb  
 Total Weight of Food Fed = 2114.4 lb

Method of calculating projected growth of fish during year:

- (1) Column 1 x Column 2 ÷ 100 = Column 3
- (2) Column 3 ÷ Column 4 = Column 5
- (3) Column 5 x Column 6 = Column 7
- (4) Column 7 + Column 1 = Column 1 next time period

**Table 7. Feeding guide based on average expected gains with a feed conversion of 1.75 at a stocking rate of 1,000 7-inch fingerlings per acre.**

Dates	Water Temp. °F	Col. 1 Wt of 1,000 Fish at Beginning	Col. 2 % of Body Wt Fed Daily	Col. 3 Wt of Food Fed/Acre/Day 1,000 Fish	Col. 4 Conversion	Col. 5 Gain in Lb Per Day	Col. 6 No. of Feeding Days	Col. 7 Gain in Lb Per Period
3/15-31	55-60	94.0	1.0	0.9	1.75	0.5	17	4.4
4/1-15	60-65	98.4	1.5	1.5	1.75	0.9	15	13.5
4/16-30	65-70	111.9	2.0	2.2	1.75	1.3	15	19.5
5/1-15	70-75	131.4	2.5	3.3	1.75	1.9	15	28.5
5/16-31	75-80	159.9	3.0	4.8	1.75	2.7	16	43.2
6/1-15	80-85	203.1	3.0	6.1	1.75	3.5	15	52.5
6/16-30	85-90	255.6	3.0	7.7	1.75	4.4	15	66.0
7/1-15	90-95	321.6	3.0	9.6	1.75	5.5	15	82.5
7/16-31	90-95	404.1	3.0	12.1	1.75	6.9	16	103.5
8/1-15	90-100	507.6	3.0	15.2	1.75	8.7	15	130.5
8/16-31	90-95	638.1	3.0	19.1	1.75	10.9	16	174.4
9/1-15	85-90	812.5	2.5	20.0	1.75	11.4	15	171.0
9/16-30	75-85	983.5	2.0	20.0	1.75	11.4	15	171.0
10/1-15	65-75	1154.5	1.7	20.0	1.75	11.4	15	171.0
10/16-31	60-65	1325.5	1.5	20.0	1.75	11.4	16	182.4
11/1-15	55-60	1507.9	1.3	20.0	1.75	11.4	15	171.0

Total Expected Weight of Fish = 1678.9 lb  
 Total Weight of Food Fed = 2795.3 lb

Method of calculating projected growth of fish during year:

- (1) Column 1 x Column 2 ÷ 100 = Column 3
- (2) Column 3 ÷ Column 4 = Column 5
- (3) Column 5 x Column 6 = Column 7
- (4) Column 7 + Column 1 = Column 1 next time period

## DAILY FEEDING RECORD

Week of \_\_\_\_\_ to \_\_\_\_\_

Pond #	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total

## WEEKLY POND RECORD

Week of \_\_\_\_\_ to \_\_\_\_\_

Pond # \_\_\_\_\_ Date \_\_\_\_\_ Weight of \_\_\_\_\_ Number of \_\_\_\_\_ Total \_\_\_\_\_  
           \_\_\_\_\_ Stocked \_\_\_\_\_ Fingerlings \_\_\_\_\_ Fingerlings \_\_\_\_\_ Weight \_\_\_\_\_  
           \_\_\_\_\_ Stocked \_\_\_\_\_ Stocked \_\_\_\_\_ Stocked \_\_\_\_\_  
 Size \_\_\_\_\_ Acre \_\_\_\_\_  
 Estimated Conversion Ratio: \_\_\_\_\_ Total \_\_\_\_\_ Total \_\_\_\_\_

(1) Week Ended	(2) Lb Feed Fed	(3) Lb Gain	(4) Total Fish Wt	(5) Lb Harvested or Loss	(6) Price Rec'd Per lb	(7) Remarks (Treatments, Feed, Etc.)

Total

### RECAP & ADJUSTMENT CALCULATIONS FOR FEED FED

- |                                     |   |       |
|-------------------------------------|---|-------|
| 1. Beginning Feed Inventory         | = | _____ |
| 2. Total Feed Purchased             | = | _____ |
| 3. Ending Feed Inventory            | = | _____ |
| 4. Feed Used (1 + 2 - 3)            | = | _____ |
| 5. Total Feed Fed From Pond Records | = | _____ |
| 6. Correction Factor (4 ÷ 5)        | = | _____ |

POND CONVERSION RATIO CALCULATIONS

Correction Factor — (C.F.) = \_\_\_\_\_

Pond #	(1) Est. Lb Feed Fed (Form 103)	(2) Actual Lb Feed Fed (1) x (C.F.)	(3) Total Stocking Wt	(4) Total Lb Harvested (Form 103)	(5) Conversion Ratio 2/(4 - 3)

Distributed by **Dr. Martin W. Brunson**, Extension Leader, Wildlife and Fisheries, Mississippi State University. Written by Dr. Tom Wellborn, Jr., former leader, Extension Wildlife and Fisheries.

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**Publication 1465**

Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. HIRAM D. PALMERTREE, Director

(5M-4-91)