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Crawfish Production

Harvesting, Marketing and Economics

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Harvesting crawfish is labor intensive and accounts for 60 to 80 percent of production costs. Crawfish are generally harvested 120 to 150 days per production season (November-June) in well-managed ponds. However, if there is a poor fall and winter crawfish recruitment, harvest may be restricted to March-May (60 to 90 days). In well-managed ponds about one-third of the crawfish are harvested from November-February, one-third from March-April, and the remainder in May.

Crawfish are captured in traps constructed from 3/4-inch mesh wire, and baited with 1/4 to 1/3 pound of fish (cupleids, catastomids, cyprinids are most common), formulated bait, or a combination of both. Traps are set at a density of 20 to 40 traps per acre. They are baited and emptied daily, 4 to 6 days per week depending on the catch, price structure for crawfish and market demand. More than 25 different trap designs are used but the most effective traps have two or three entrance funnels, are made from PVC-coated wire, have retainer bands or collars to minimize crawfish escape, and are set upright in the water column ("stand-up" traps – Figure 1). Daily crawfish catch is cyclic and is influenced by many factors including water temperature, water quality, weather, forage type and forage quantity, crawfish growth and recruitment patterns, trap design, baits, and harvesting intensity.

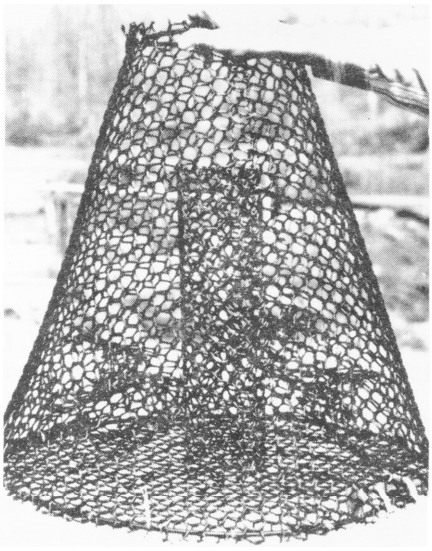


Figure 1. Typical stand-up trap used for harvesting crawfish.

Crawfish can be effectively harvested from small ponds by one or more persons who "walk" the pond while pulling a small boat into which harvested crawfish are placed. About 400 traps per person per day can be emptied using this technique. Crawfish harvesting boats powered by air-cooled engines increase harvesting efficiency by allowing harvest personnel to empty and re-bait 200 to 300 traps per hour. Harvest boats are indispensable for efficient crawfish harvest ponds larger than 10 acres. Another harvesting boat pulled by a hydraulically driven front wheel has been extensively used in harvesting crawfish from larger ponds.

As crawfish are harvested they are placed into ventilated mesh bags or sacks that can hold 40 to 50 pounds of crawfish. All debris such as vegetation and bait residue is removed before crawfish are placed in the sacks. The "sacked" crawfish are placed in a high humidity cooler (46°F to 48°F) within 2 to 3 hours of harvest If handled properly, the crawfish can be stored alive for several days until they are resold or further processed.

* Extension Cooperative Extension Service and Louisiana Agricultural Experiment Station, respectively.

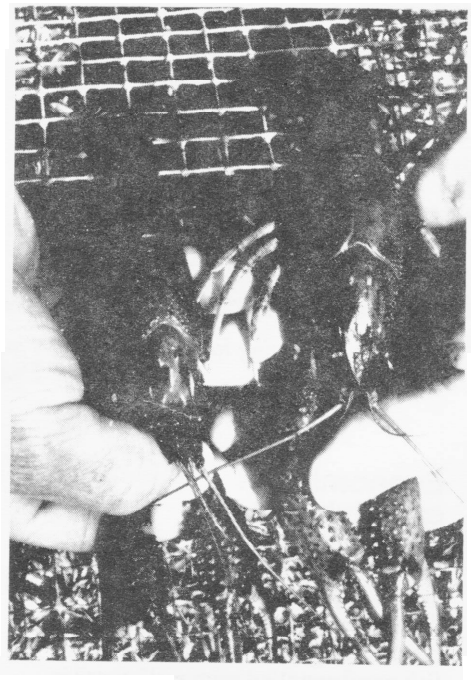
Table 1. Estimated investment requirements and annual depreciation charges for a 40-acre crawfish pond in southwestern Louisiana, 1987.[1]

Item	Investment/Pond $USD	Depreciation/Pond $USD
Pond Construction		
Dirt Moving	$6,192	
Water Control Structures	1,462	
Ground Cover	334	
Total Construction Cost	$7,988	
Equipment		
Broodstock	821	82
Well	11,000	550
Oxygen Meter	600	150
Crawfish Combine	5,000	500
Truck	9,000	1,500
Traps	6,191	2,064
Cooler	1,193	239
Scale	95	19
Aerator	424	42
Mower	700	233
Waders	224	112
Pump	9,738	649
Engine-Gearhead	12,573	838
Total Equipment Cost	$57,559	$6,978
Total	$65,547	$6,978

[1]**Source:** Dellenbarger, L., L. Vandeveer, and M. Clarke. 1987. Estimated investment requirements, production costs, and break-even prices for crawfish in Louisiana, 1987. DAE Research Report 670, Louisiana Agricultural Experiment Station, LSU Agricultural Center, Baton Rouge, LA.

Table 2. Estimated annual operating costs ($USD) associated with a 40-acre crawfish pond in southwestern Louisiana, 1987.[1]

Variable Costs	
Forage	$1,641
Fuel/Well	1,834
Repairs and Maintenance	1,059
Labor ($5/h)	2,918
Herbicides	157
Sacks	146
Bait ($0.16/lb)	5,835
Total Variable Costs	**$13,590**
Fixed Costs	
Depreciation	**6,978**
Interest (12%)	**3,605**
Total Fixed Cost	**$10,583**
Total Annual Cost	**$24,173**



Crawfish Specimen

Both red and white crawfish are accepted food items.

Table 3. Comparison of estimated break-even prices associated with crawfish production in southwestern Louisiana, 1987.[1]

Acreage Devoted to Production	Production In Pounds				
	700	900	1,100	1,300	1,500
	Cents per Pound				
10	1.90	1.48	1.21	1.02	.89
20	1.25	.97	.79	.68	.59
40	.94	.73	.60	.51	.44
80	.79	.61	.50	.42	.37

[1]**Source:** Dellenbarger, L., L. Vandeveer, and M. Clarke. 1987. Estimated investment requirements, production costs, and break-even prices for crawfish in Louisiana, 1987. DAE Research Report 670, Louisiana Agricultural Experiment Station, LSU Agricultural Center, Baton Rouge, LA.

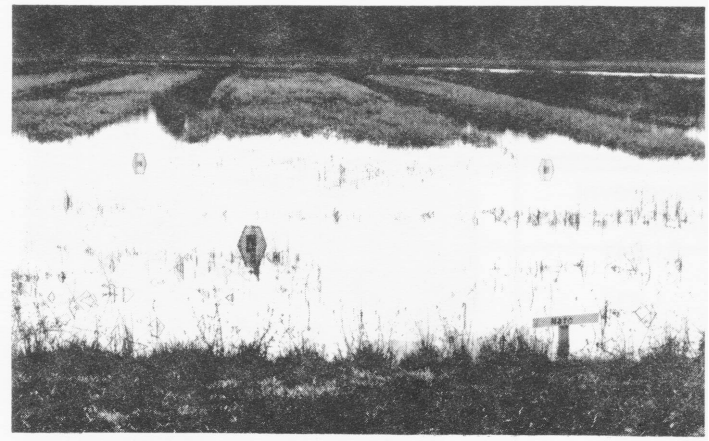


Figure 2. Trapping lanes are essential in heavy rice stands.

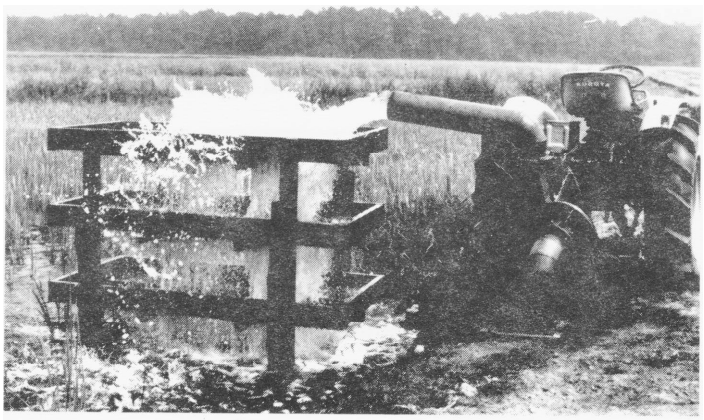


Figure 3. Recirculation and aeration are common practices for intensive crawfish production.

Economics of crawfish culture

The estimated investment requirements, depreciation charges, estimated annual operating cost, and break-even price for a 40-acre crawfish pond supplied with well water in southwestern Louisiana are presented in tables 1,2 and 3. Pond construction costs are about $200 per acre, and annual depreciation on equipment purchases is approximately $174 per acre. Bait purchases ($145 per acre) to harvest crawfish account for 43 percent of annual variable costs, and labor ($73 per acre), 22 percent. Most of the expense in labor is associated with harvest. Cost during the harvest season accounts for about 75 percent of annualized variable costs.

Marketing

Louisiana produces 90 percent of the crawfish in the world (figures 2 and 3 show some typical intensive crawfish production practices) and consumes 70 percent locally. Because of the demand for quality seafood, crawfish sales have increased both nationally and internationally. There is a large difference in the price of crawfish in Louisiana and other states. Research your markets, both wholesale and retail, and match your production to your projected market needs.

New product development with whole, cooked, frozen crawfish and prepared frozen dishes has increased the distribution of processed crawfish sales when compared to the limited distribution of live crawfish sales.

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