Breakeven Costs of Catfish Production

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Recent reports have indicated that grain prices are expected to increase in 2011 and will likely lead to higher prices of catfish feed than in 2010. This raises the question of how high the cost of catfish production will increase with these increasing feed prices.

The Arkansas catfish production budgets were developed based on cost structures identified in a 2001 survey of the catfish industry. As a result, separate enterprise budgets were developed for five different farm sizes: 60 acres, 131 acres, 256 acres, 431 acres, and 1,007 acres. The costs of various inputs are updated periodically, and the budgets can be found on the web site of the Aquaculture/Fisheries Center of the University of Arkansas at Pine Bluff (www.uaex.edu/aqfi). However, every farm situation is unique and has varying types and levels of costs that correspond to different production systems and strategies. The effect of higher feed prices on each farm's costs should be analyzed carefully; the attached table is provided for general guidance only.

To examine the effect of varying feed prices on the cost of producing catfish, feed prices ranging from $200/ton to $450/ton were entered into the enterprise budgets for each farm size and the breakeven prices (costs of production) recorded. There are two types of breakeven prices reported in the accompanying table. Breakeven prices above variable costs (BEP/VC) are the operating costs of production that include feed, fingerlings, utilities, and seining and hauling costs. Prices received for catfish must be higher than the BEP/VC for the farm to stay in production; otherwise, farms would lose money with every pound of fish sold. Breakeven prices above total costs (BEP/TC) reflect the prices needed to cover all costs of production, both cash

and non-cash costs such as depreciation. In the long run, businesses must cover all costs of production to stay in business because equipment needs to be replaced, levees need to be graveled, and ponds need to be re-worked periodically. Some farms may show accounting profits at catfish prices that are less than BEP/TC, but to stay in business over the long run, all costs must be covered.

The accompanying table lists both BEP/VC and BEP/TC for the five farm sizes for feed prices from $200/ton to $450/ton, in increments of $10/ton. Costs of production increase by about $0.01/lb for every $10/ton increase in feed prices. According to these tables, the price of catfish needs to be at least $0.89/lb to $0.96/lb at feed prices of $400/ton. At these prices, farms just break even; true economic profit requires prices to be higher than these breakeven prices.

Feed prices	60-acre		131-acre		256-acre		431-acre		1,007-acre	
$/ton	BEP/TVC	BEP/TC	BEP/TVC	BEP/TC	BEP/TVC	BEP/TC	BEP/TVC	BEP/TC	BEP/TVC	BEP/TC
200	$0.51	$0.73	$0.51	$0.71	$0.53	$0.68	$0.52	$0.67	$0.53	$0.66
210	$0.52	$0.74	$0.53	$0.72	$0.54	$0.69	$0.53	$0.68	$0.54	$0.67
220	$0.53	$0.75	$0.54	$0.73	$0.55	$0.70	$0.55	$0.69	$0.55	$0.68
230	$0.54	$0.76	$0.55	$0.75	$0.56	$0.71	$0.56	$0.70	$0.56	$0.70
240	$0.55	$0.77	$0.56	$0.76	$0.57	$0.72	$0.57	$0.71	$0.57	$0.71
250	$0.57	$0.78	$0.57	$0.77	$0.59	$0.73	$0.58	$0.72	$0.58	$0.72
260	$0.58	$0.80	$0.58	$0.78	$0.60	$0.75	$0.59	$0.74	$0.59	$0.73
270	$0.59	$0.81	$0.59	$0.79	$0.61	$0.76	$0.60	$0.75	$0.61	$0.74
280	$0.60	$0.82	$0.61	$0.80	$0.62	$0.77	$0.62	$0.76	$0.62	$0.75
290	$0.61	$0.83	$0.62	$0.81	$0.63	$0.78	$0.63	$0.77	$0.63	$0.76
300	$0.62	$0.84	$0.63	$0.83	$0.64	$0.79	$0.64	$0.78	$0.64	$0.78
310	$0.63	$0.85	$0.64	$0.84	$0.65	$0.80	$0.65	$0.79	$0.65	$0.79
320	$0.65	$0.86	$0.65	$0.85	$0.67	$0.82	$0.66	$0.80	$0.66	$0.80
330	$0.66	$0.88	$0.66	$0.86	$0.68	$0.83	$0.67	$0.82	$0.67	$0.81
340	$0.67	$0.89	$0.68	$0.87	$0.69	$0.84	$0.68	$0.83	$0.69	$0.82
350	$0.68	$0.90	$0.69	$0.88	$0.70	$0.85	$0.70	$0.84	$0.70	$0.83
360	$0.69	$0.91	$0.70	$0.89	$0.71	$0.86	$0.71	$0.85	$0.71	$0.85
370	$0.70	$0.92	$0.71	$0.91	$0.72	$0.87	$0.72	$0.86	$0.72	$0.86
380	$0.72	$0.93	$0.72	$0.92	$0.73	$0.88	$0.73	$0.87	$0.73	$0.87
390	$0.73	$0.95	$0.73	$0.93	$0.75	$0.90	$0.74	$0.88	$0.74	$0.88
400	$0.74	$0.96	$0.74	$0.94	$0.76	$0.91	$0.75	$0.90	$0.76	$0.89
410	$0.75	$0.97	$0.76	$0.94	$0.77	$0.92	$0.76	$0.91	$0.77	$0.90
420	$0.76	$0.98	$0.77	$0.96	$0.78	$0.93	$0.78	$0.92	$0.78	$0.91
430	$0.77	$0.99	$0.78	$0.98	$0.79	$0.94	$0.79	$0.93	$0.79	$0.93
440	$0.78	$1.00	$0.79	$0.99	$0.80	$0.95	$0.80	$0.94	$0.80	$0.94
450	$0.80	$1.01	$0.80	$1.00	$0.82	$0.96	$0.81	$0.95	$0.81	$0.95