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EVALUATION OF JUVENILE AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus* FED PRACTICAL DIETS WITH AND WITHOUT SUPPLEMENTAL LECITHIN AND/OR CHOLESTEROL

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Red claw crayfish (*Cherax quadricarinatus*) are one of more than a hundred Australian freshwater crayfish. However, because of its rapid growth rate, ease of spawning, wide temperature tolerance, and lack of a larval stage, red claw may be the best candidate for aquaculture in the United States. Red claw are only being investigated as an aquaculture species in this country and very little information exists on their nutritional requirements and practical diet formulations. Since many crayfishes require lecithin and cholesterol to be added to their diet, these two nutrients are usually added to diets. Lecithin and cholesterol are very expensive. Since diet costs can be as much as 70% of the total cost of raising crayfish for an aquaculture enterprise, it is imperative that the least expensive diet be formulated that meets the nutritional requirements of the species. The present study was conducted to determine if cholesterol and lecithin needs to be added to a practical diet for red claw crayfish.

An 8-week feeding trial was conducted in a recirculating system with newly-hatched juvenile red claw, each stocked in a 100 L mesh culture unit. Individual units were placed within fiberglass tanks, each containing a 100 L water line. Water was recirculated through a mechanical filter, water temperature was maintained at 27-29°C and lighting was provided by fluorescent ceiling lights (14:10 L:D) on a dark cycle. Ammonia, nitrite, nitrate, dissolved oxygen, temperature, alkalinity, chlorides, and pH were monitored every two weeks. The goal of this study was to determine the least expensive practical diet for red claw crayfish.

TABLE 1. Formulation of experimental diets fed to red claw crayfish.

	Diet			
	1	2	3	4
Menhaden FM	25.0	25.0	25.0	25.0
Soybean Meal	35.0	35.0	35.0	44.5
Lecithin 0.5	0.0	0.5	0.0	0.0
Cholesterol	1.0	1.0	0.0	0.0
Other	38.5	39.0	39.5	30.5

2.5 cm margin

21 cm long

2.5 cm margin

2.5 cm margin

21 cm wide