

cost rather than weight gain alone (Mayzuri et al., 2025). Across these studies, fresh trash fish remains effective but operationally limited, mixed feeding often improves overall performance, and the best regime is the one that aligns nutrient profile, feed form, ration, and culture system with the specific production goal.



Figure 3 Major feed sources used in mixed feeding strategies for mud crab aquaculture

8 Case Study: Application Effects of Different Feeding Modes in Mud Crab Culture

8.1 Scheduled and quantitative feeding

Scheduled and quantitative feeding in mud crab culture is designed to match ration size and feeding time with the animal's metabolic demand while limiting waste. In fattening systems, this approach often uses fixed percentages of body weight and set feeding times rather than continuously increasing meal frequency. Recent RAS work on *Scylla serrata* found that changing feeding frequency from once to three times daily did not significantly alter survival, growth, molting, or feed utilization, indicating that a stable schedule can maintain performance without requiring more frequent manual feeding (Diatin et al., 2026). Similarly, another RAS experiment reported no significant growth or survival advantage from increasing feeding frequency, and the once-daily treatment still produced 100% survival with 52.00 ± 21.17 g weight gain and $5.04 \pm 0.14\%$ day⁻¹ specific growth rate.

The quantitative component appears especially important when feed allowance, rather than feeding frequency alone, is manipulated. In a crab-box fattening study using raw fish, different feed doses significantly affected absolute weight gain and specific growth rate, while survival and FCR remained statistically similar among treatments,