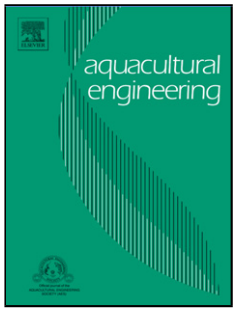

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Assessing appetite of the swimming fish based on spontaneous collective behaviors in a recirculating aquaculture system

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Highlights

- A novel and practical method was proposed to assess the real-time appetite of the swimming fish in a recirculating aquaculture system;
- Spontaneous collective behaviors of fish school were analyzed in three aspects: dispersion degree, interaction force and changing magnitude of water flow field;
- Information on the reflective areas of water surface was utilized innovatively to estimate the changing magnitude of water flow field caused by the spontaneous collective behaviors of fish school.