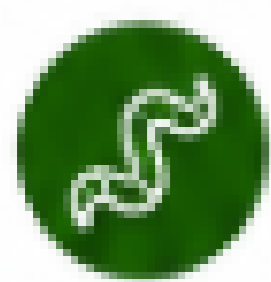


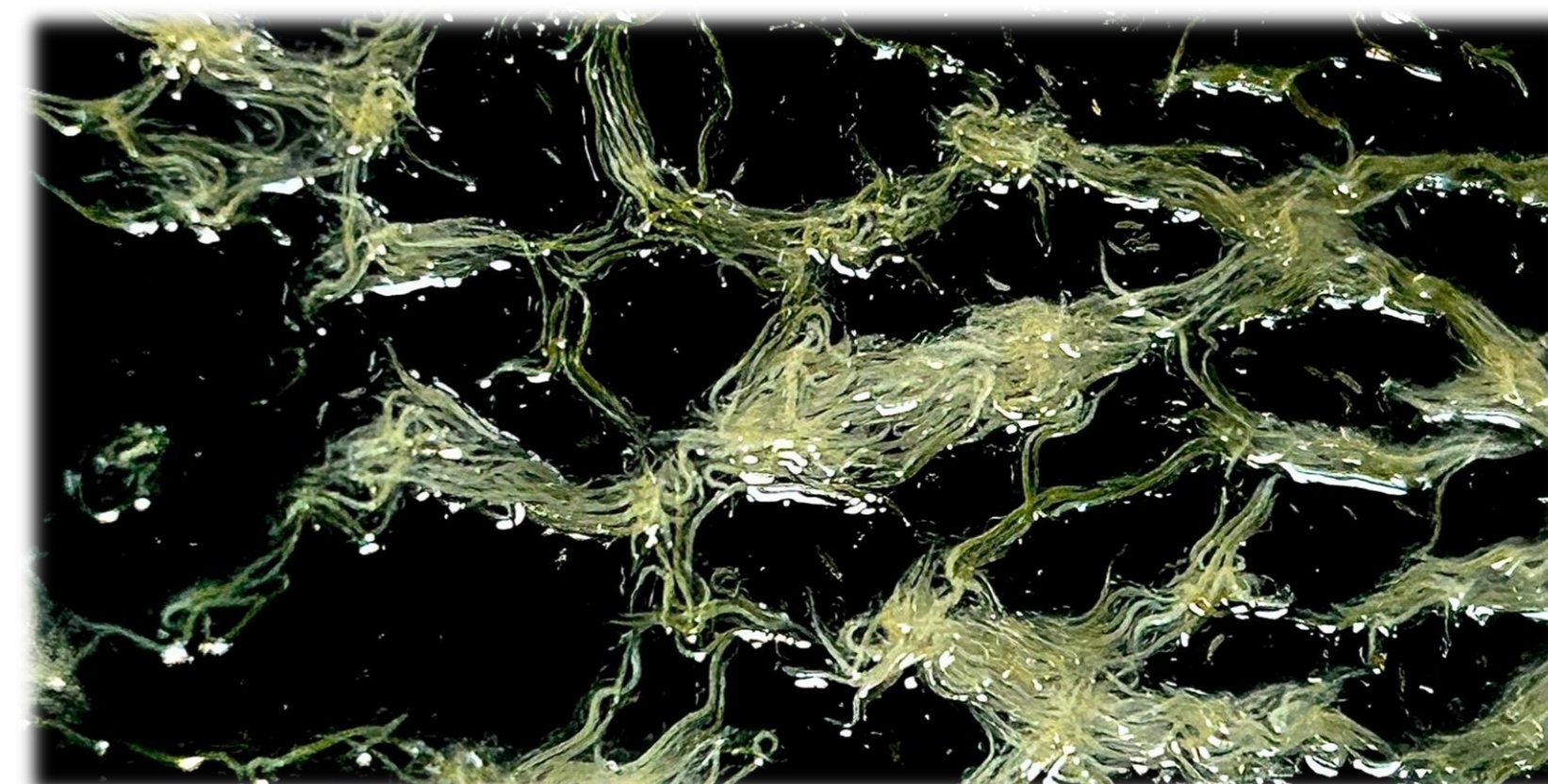
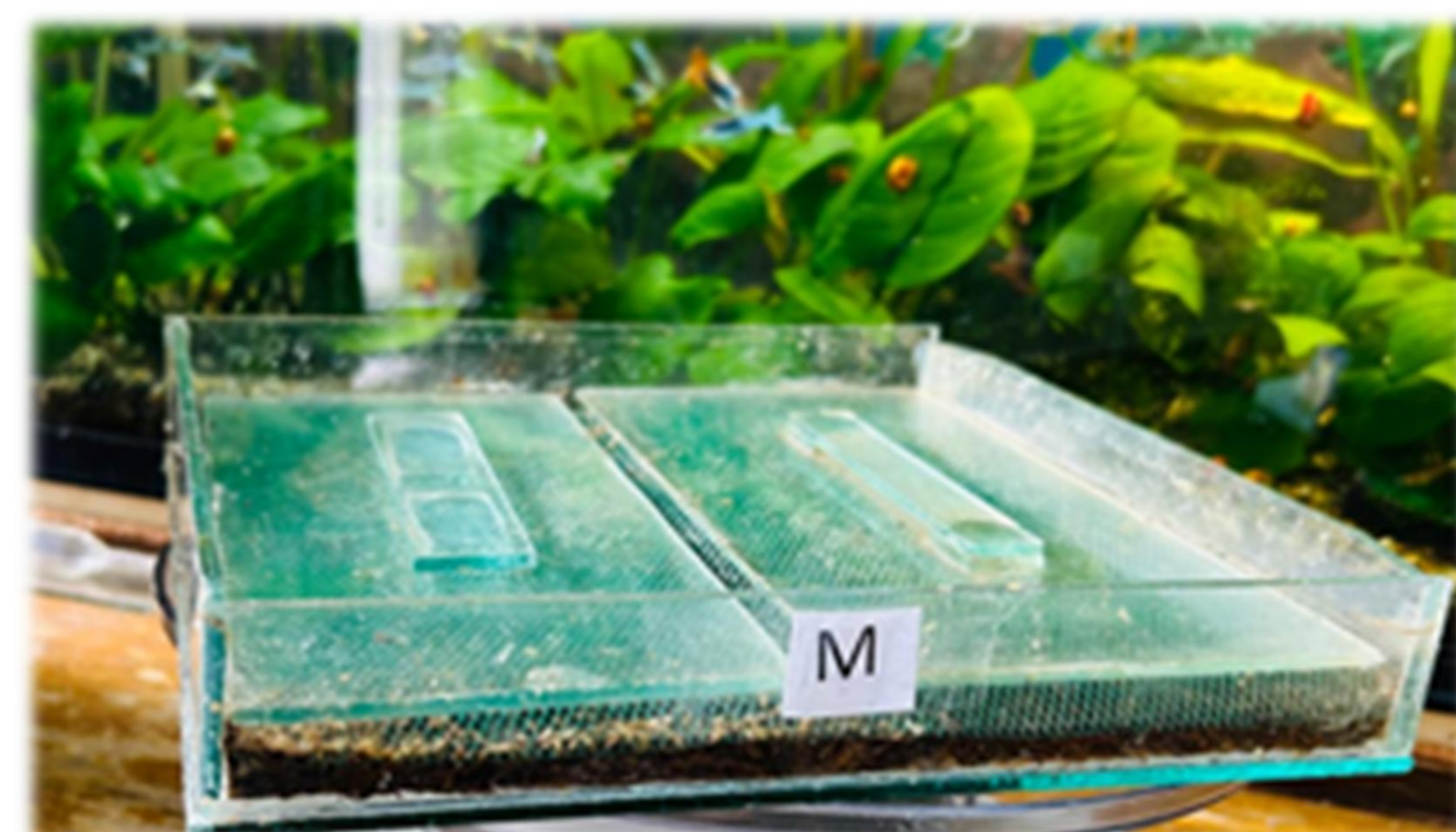


The effect of different dietary protein levels on the production of *Enchytraeus buchholzi* (Grindal)

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Abstract: *Enchytraeus buchholzi* (Grindal worm) is an important live feed organism used in aquaculture and aquaristics due to its high nutritional value. The study evaluated the effect of different feed compositions on biomass production and feed conversion efficiency. Five experimental variants (M, V1–V4) were tested for 30 days under controlled conditions using a moss substrate (*Polytrichum commune*). The results showed improved biomass production in all experimental variants compared to the control, with variant V3 (5.16% crude protein) showing the best productive performance. The study highlights the importance of feed optimization for sustainable live feed production systems.



• Introduction

- ✓ Grindal worms are widely used as live feed in aquaculture.
- ✓ Their nutritional quality depends on culture conditions and feed composition.
- ✓ Protein level may significantly influence biomass production and feed efficiency.

• Results and discussions

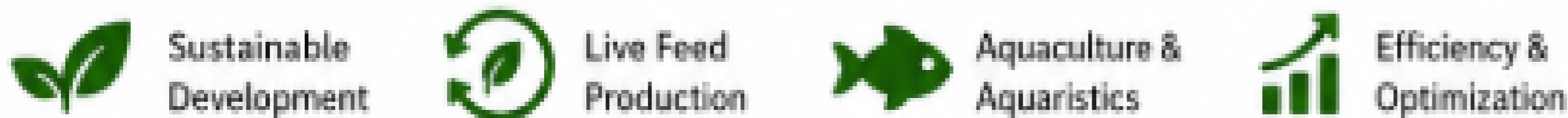
All experimental variants showed higher biomass compared to the control. Increasing protein level improved productive performance. Variant V3 recorded the highest biomass production. Feed conversion efficiency was positively influenced by feed composition.

• Conclusions

Optimizing feed composition improves biomass production in *Enchytraeus buchholzi*. Variant V3 (5.16% crude protein) proved to be the most efficient and is recommended for sustainable live feed production systems.

• Material and method

- ❑ Experimental period: 30 days
- ❑ 5 experimental variants: M, V1–V4
- ❑ Moss substrate: *Polytrichum commune*
- ❑ Humidity: approximately 84%
- ❑ Feed amount: 338 g in all variants
- ❑ Protein levels: M – 4.05%, V1 – 4.36%, V2 – 4.76%, V3 – 5.16%, V4 – 5.55%.



DURATION 30 days	SUBSTRATE Moss substrate (<i>Polytrichum commune</i>) Humidity ~84%	FEED AMOUNT Same amount in all variants: 338 g	EXPERIMENTAL VARIANTS (protein level) M – 4.05% (control) V1 – 4.36% V2 – 4.76% V3 – 5.16% V4 – 5.55%
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