

IS SUPPORTING PERIPHYTON GROWTH WORTHWHILE IN PIKEPERCH FRY PRODUCTION?

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Hypothesis

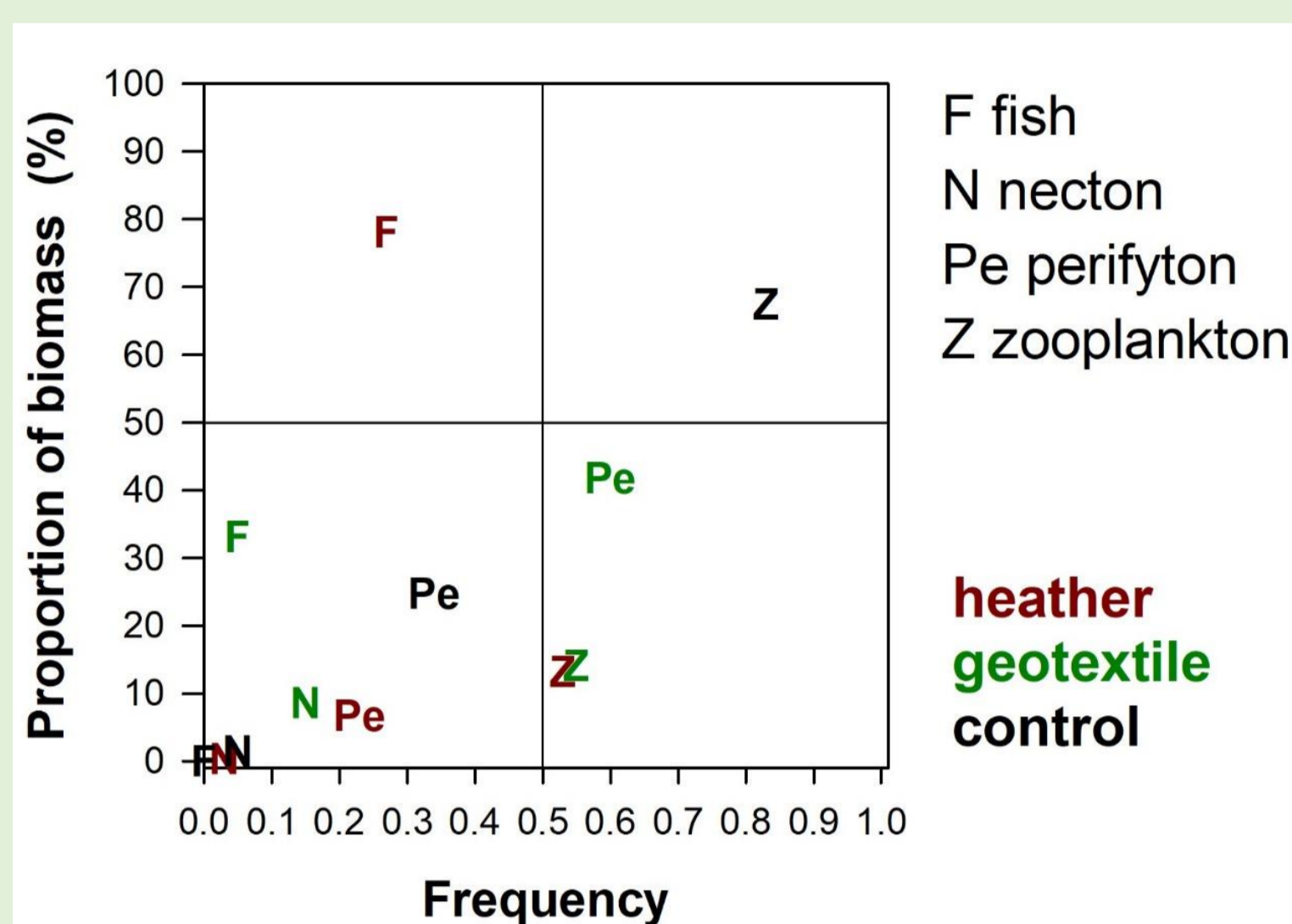
Substrates in temperate zone fishponds promote periphyton development, thereby **modifying food composition** and **enhancing pikeperch larval survival and production**.

Conclusion

Promoting pikeperch production using artificial substrates is **possible under Central European conditions**. Substrate installation may **accelerate the transition of juvenile fish to a predatory diet**.

Results: Diet of pikeperch larvae

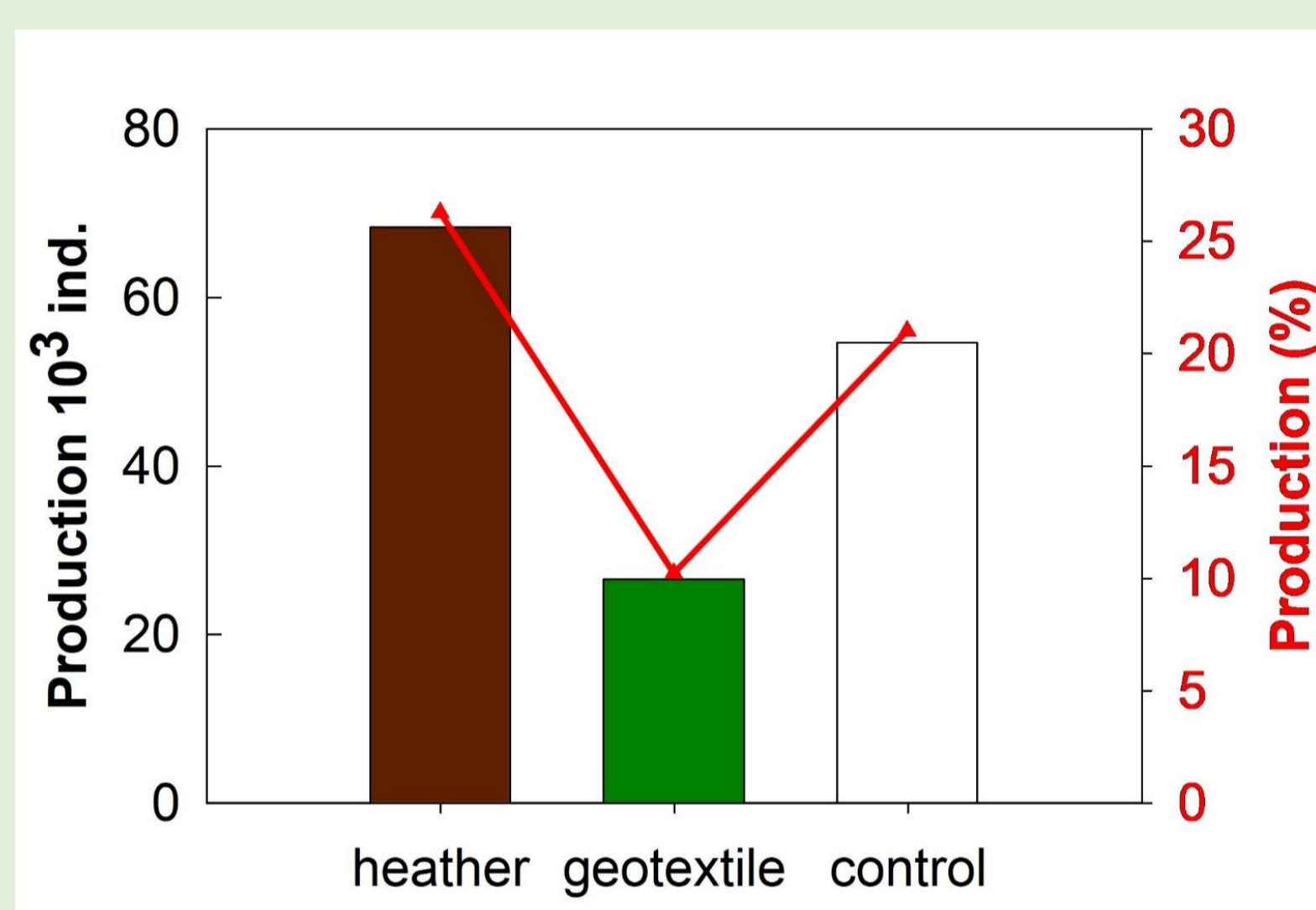
In contrast to the control where planktonic prey clearly dominated, periphyton or fish prey were also important in the substrate treatments.



Diet profile of pikeperch fry on the 47th day of rearing in the fishponds.

Results: Production of pikeperch larvae

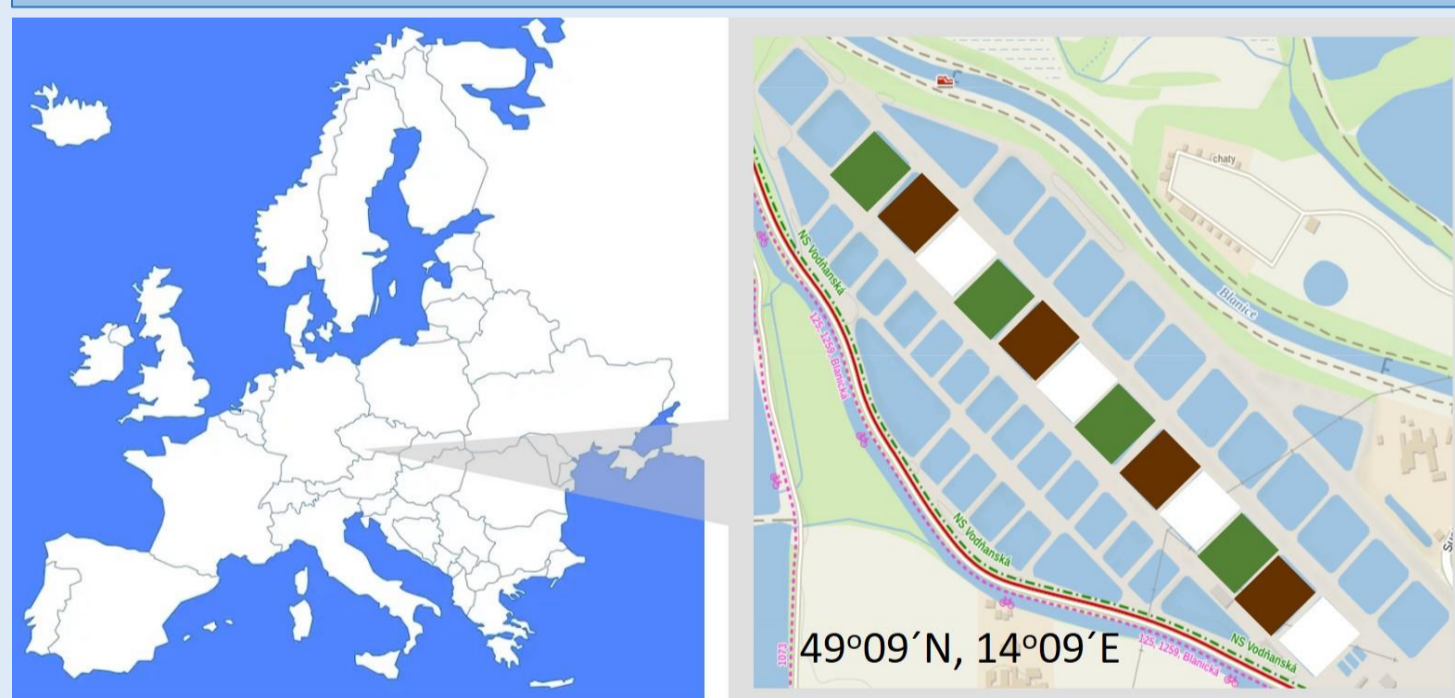
Survival and production rates were highest in the heather, despite fish reaching the smallest size. In contrast, the geotextile resulted in the lowest survival and production, with fish size comparable to the control group.



Production of advanced pikeperch fry after 47 days of rearing in the fishponds.

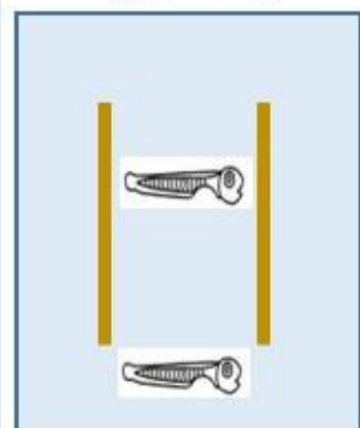
Methods

pikeperch (*Sander lucioperca* (L.)):
larvae (TL: 5 ± 0.2 mm)
stocking density: 374,000 ind.ha⁻¹
47 days
advanced fry



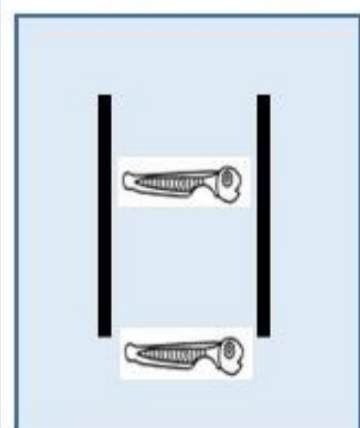
n = 4

substrate: heather



n = 4

substrate: geotextile



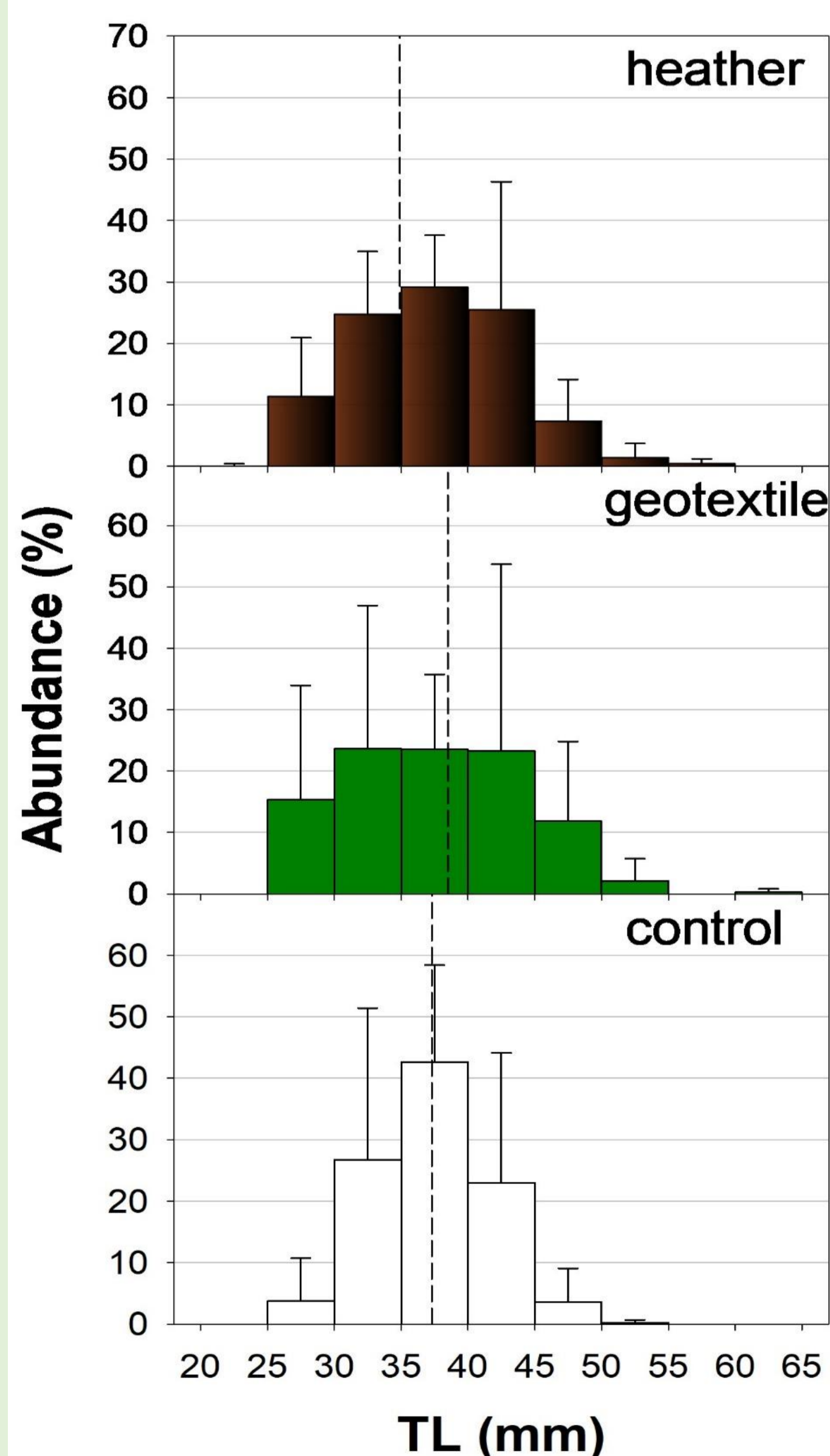
n = 4

no substrate



control

Twelve fishponds; each measuring 0.2 ha; depth at the outlet: 1.2 m, and mean water temperature 16.4 ± 1.5 °C (S.D.); substrates: two belts 25 × 1.5 m (i.e., 44 – 48 m² per fishpond).



Histogram of relative frequencies of total length (TL) (mean ± S.D.) of advanced pikeperch fry after 47 days of rearing in the fishponds. The dashed lines show the mean total length.

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