



Aquatic Macrophyte

Ecotoxicology Group: AMEG

Update *Myriophyllum* Working group

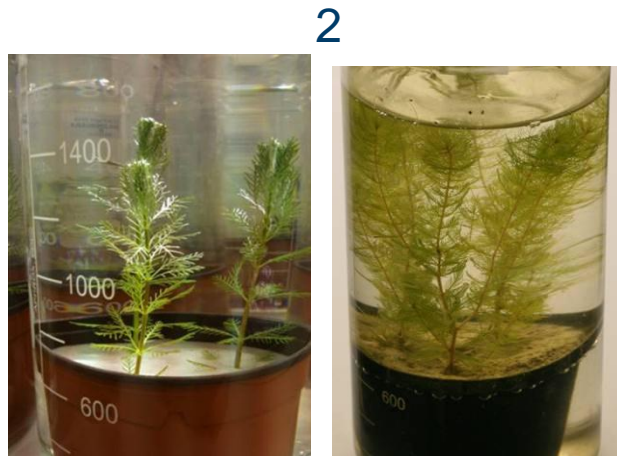


Three *Myriophyllum* test designs

1. **'UBA-design'**: sediment-free test based on ASTM Standard E 1913-04

2. **'AMRAP design'**: water-sediment test, developed as follow-up of the SETAC AMRAP workshop

3. Sediment-only test with *M. aquaticum* (U. Feiler, BfG, Koblenz, Germany) for the assessment of sediment quality: not discussed here (focus on risk assessment for plant protection products)





Test system and species

	UBA	AMRAP
Test system	Water only, sterile conditions, addition of sucrose (3%)	Smart-Barko medium (without N & P) OECD 219 sediment (plus N & P)
Test species	<i>M. spicatum</i> (<i>M.s.</i>)	<i>M.s.</i> or <i>M. aquaticum</i> (<i>M.a.</i>) (method in principle suitable for testing submersed and emergent macrophytes)



Statistical evaluation of test designs

- Both test designs have statistically been evaluated;
- Growth rates exhibited lower variability and better statistical power than yields;
- All test methods and almost all endpoints allow statistical testing at MDDs 14% - 25%;
- Statistically all test methods are appropriate for assessment of toxic metrics (ECx, NOEC);
- Differences in sensitivity of species and test designs;
- Updating test protocols to increase uniformity and decrease variability;
- Reports will be available by the end of the year.