

Workshop on:
Algae for Bioenergy and Bioproducts

13 September 2016, Brussels

KEY CHALLENGES



Key challenges - MICROALGAE

1. - Development of suitable technologies for large scale production of microalgae
 - ✓ To maximize algal growth
 - ✓ Lower final biomass total costs.
2. - Coupling the production of microalgae with treatment of wastes
 - ✓ To increase the sustainability (LCA)
 - ✓ To reduce the cost/energy of waste treatment
 - ✓ The only way to produce low-added value products from microalgae?
- 3.
4. - Downstream processing
 - ✓ Need to be specifically designed and optimized for each microalgae species?
 - ✓ ..and applications?
5. - Closed *versus* open systems
 - ✓ when energy is the goal – common sense!
6. - Microalgal growth
 - ✓ Are the nutrients the limiting factor?
 - ✓ What about the phosphorus?

Key challenges - MACROALGAE

1. - **Applications innovation**
 - ✓ To create new macroalgae based products
2. - **Biology/genetics**
 - ✓ To improve macroalgae productivity
 - ✓ To improve macroalgae quality
3. - **Provide robust seaweed biomass supply**
 - ✓ Need of stable and sufficient biomass availability
4. - **Biofuels production from seaweed**
 - ✓ Need to develop robust fermentative and thermochemical process concept