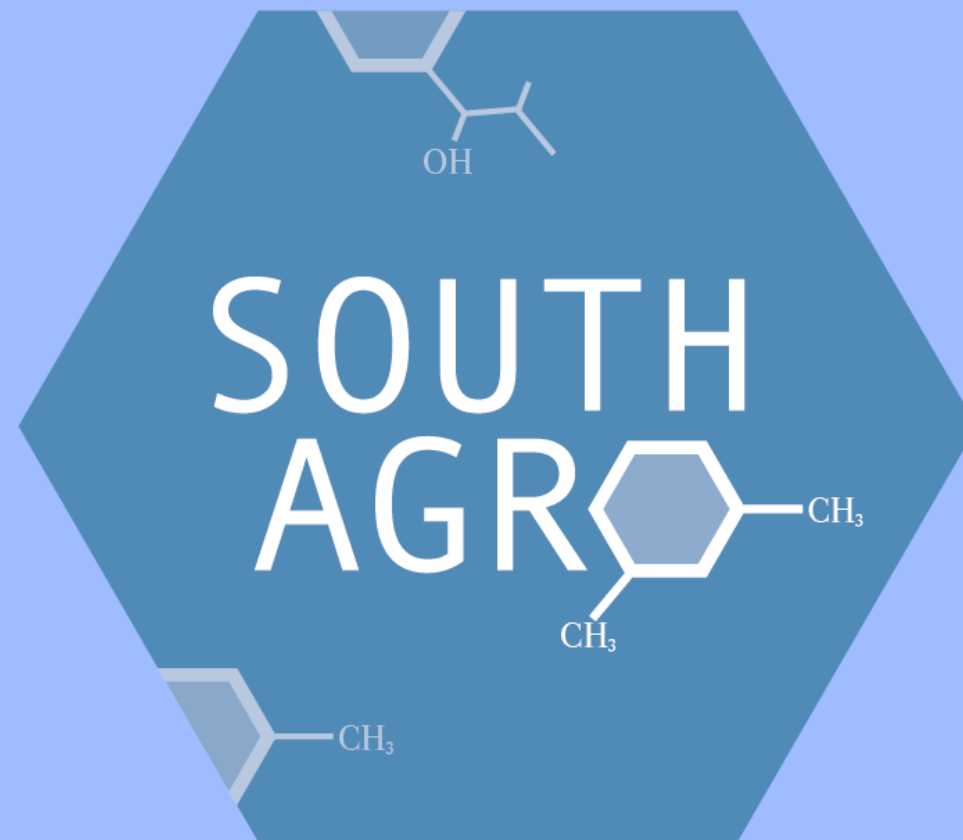


# « Biostimolanti per l'agricoltura da macroalghe mediterranee: dalla ricerca con il CNR-IAMC di Taranto alla produzione »

Estratti algali per un'agricoltura più sostenibile

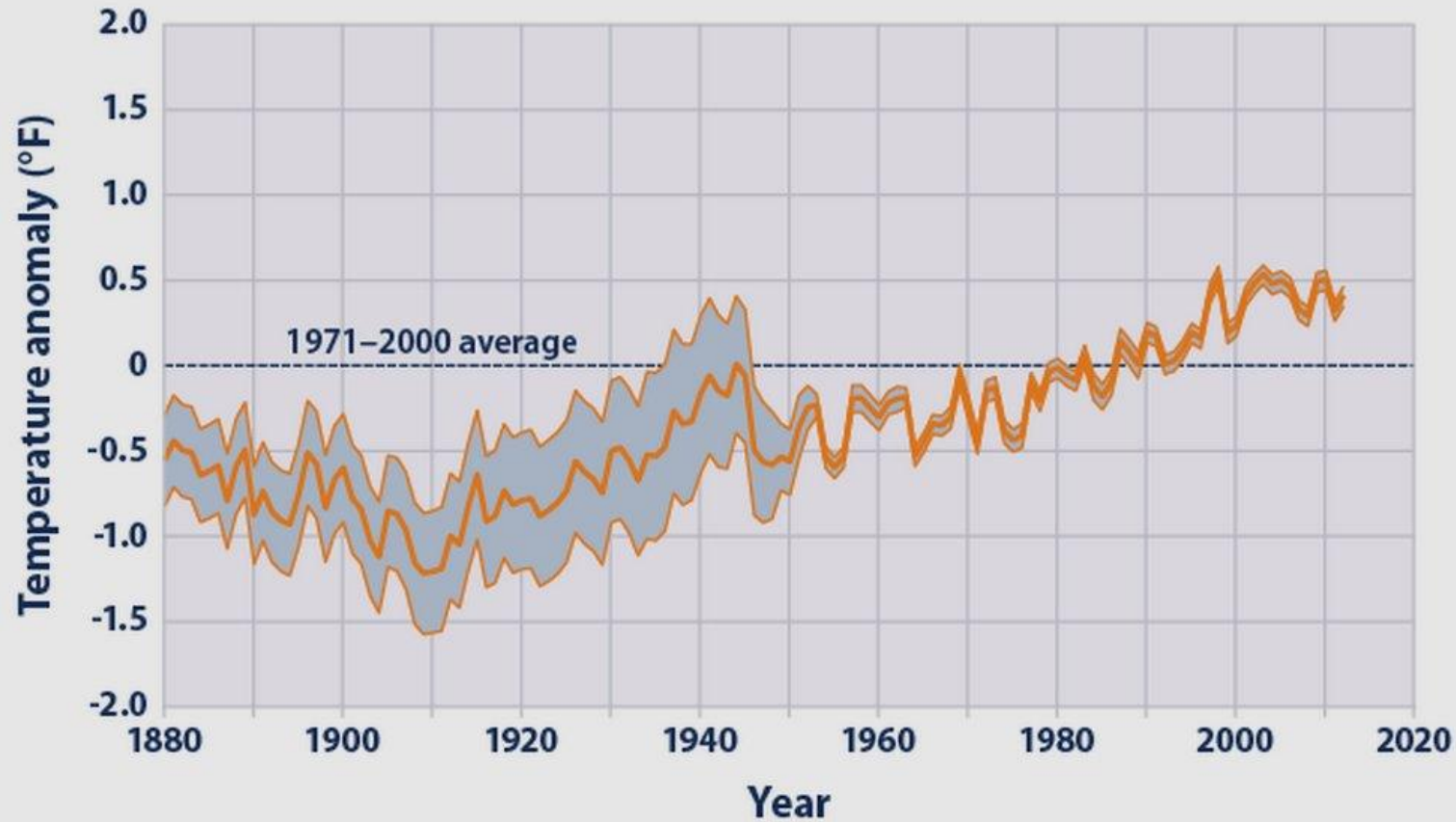


Pordenone 15/02/2018



# GLOBAL WARMING A NEW CHALLENGE:

Average Global Sea Surface Temperature, 1880–2012

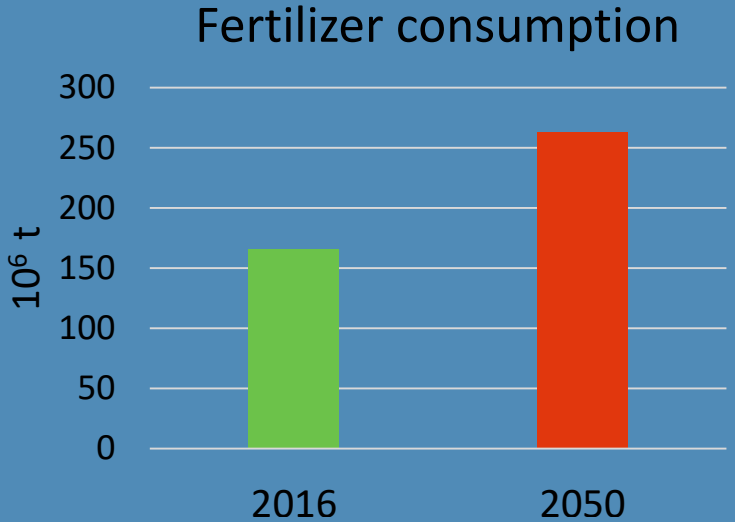
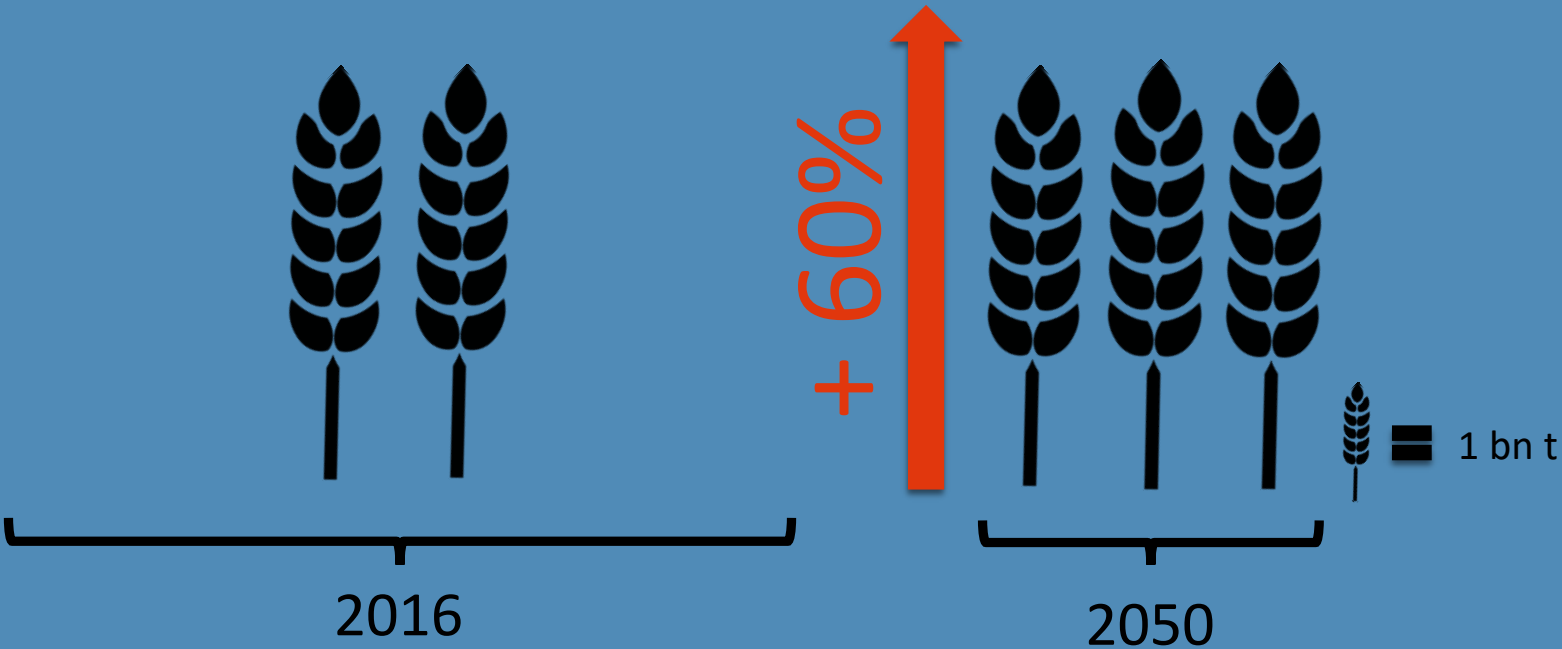
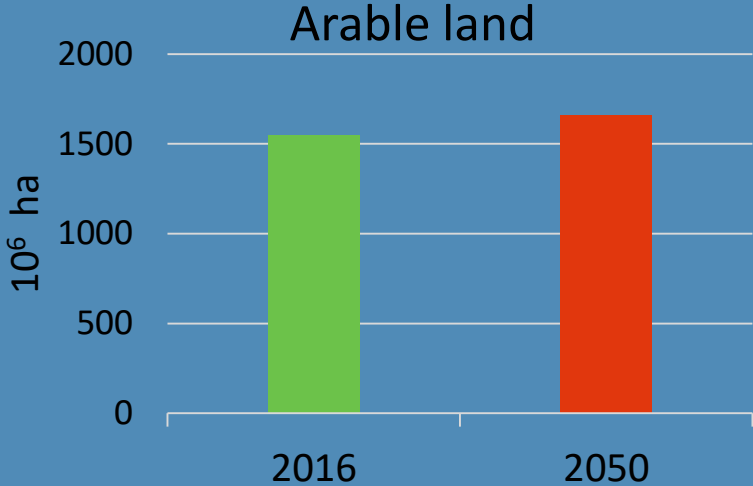
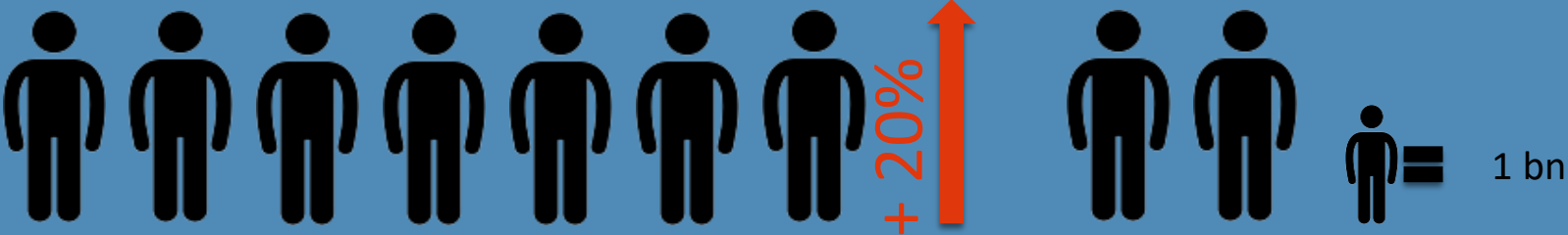


Data source: NOAA (National Oceanic and Atmospheric Administration). 2013. Extended reconstructed sea surface temperature (ERSST.v3b). National Climatic Data Center. Accessed February 2013. [www.ncdc.noaa.gov/ersst/](http://www.ncdc.noaa.gov/ersst/).

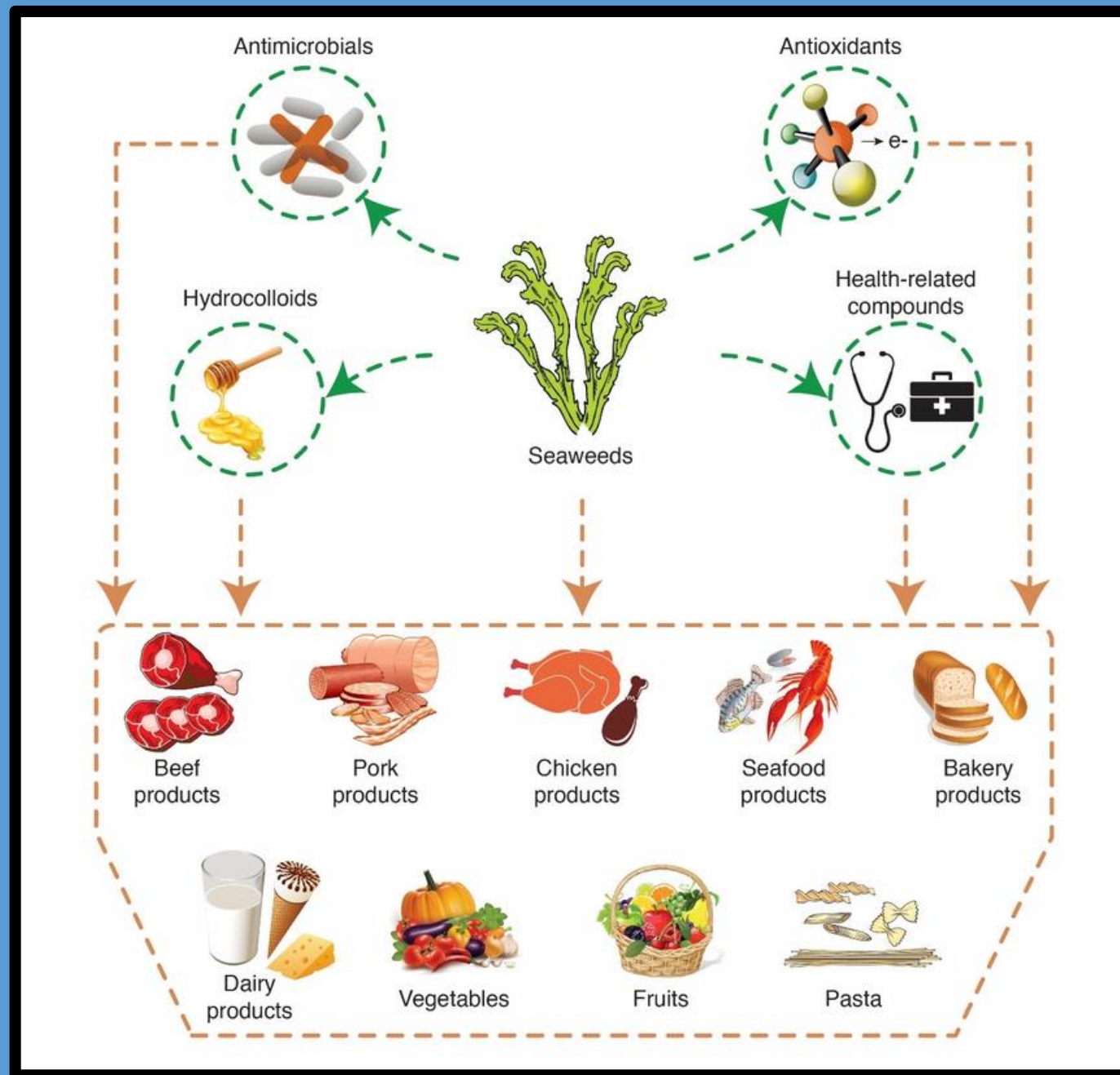
For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at [www.epa.gov/climatechange/indicators](http://www.epa.gov/climatechange/indicators).



# DEMOGRAPHIC GROWTH AND AGRICULTURE:







# BIOSTIMULANTS

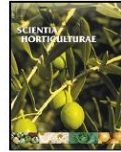




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Review

Plant biostimulants: Definition, concept, main categories and regulation

Patrick du Jardin

Plant Biology Unit, Gembloux Agro-Bio Tech, University of Liège, Belgium, 2, Passage des Déportés, B-5030 Gembloux, Belgium

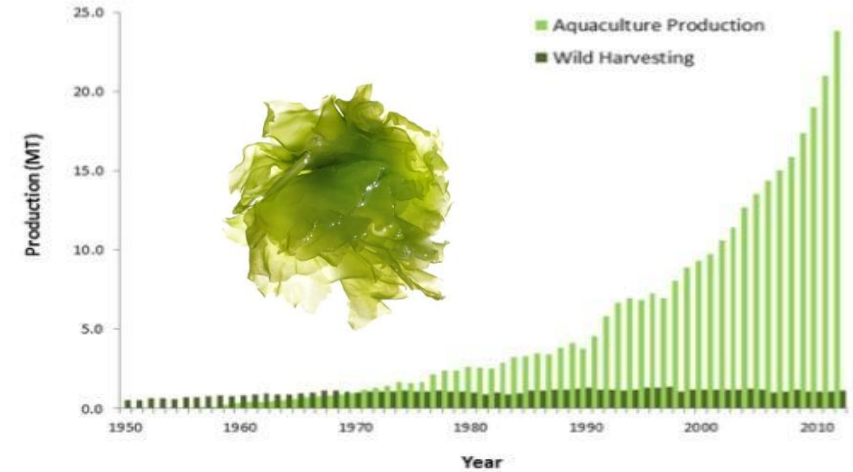


«A plant biostimulant is any substance or microorganism applied to plants with the aim to enhance nutrition efficiency abiotic stress tolerance and/or crop quality traits, regardless of its nutrients content»

**PECULIAR POLYSACCARIDES**

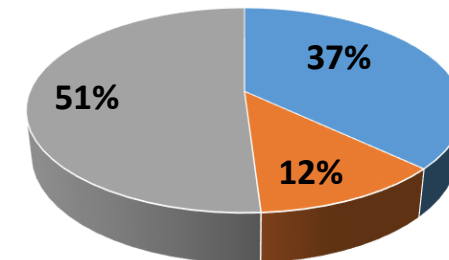
**BETAINE**

**PHYTOHORMONES**



Global seaweed aquaculture production (1950-2014). FAO (2015)

## BIOSTIMULANTS MARKET SEGMENTATION



■ Seaweeds ■ Microbes & plant ■ Humic & Fulvic A.





# EXPANDING MARKET:

Total commercial value  
1,8 bn €

40% EU market  
4% Developing countries

+10% CAGR 2016-2021 GLOBAL  
+15% CAGR 2016-2021 IT, ES, FR

200 COMPETITORS  
90% SME

DATI:

Markets&markets

European Biostimulants Industrial Council

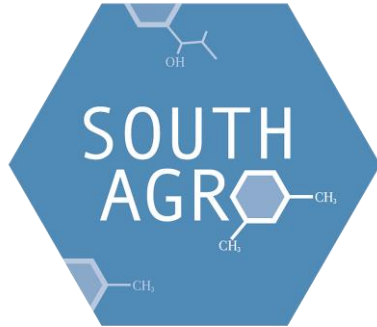
# COLLECTION OR PRODUCTION OF ALGAE IN MEDITERRANEAN BASIN



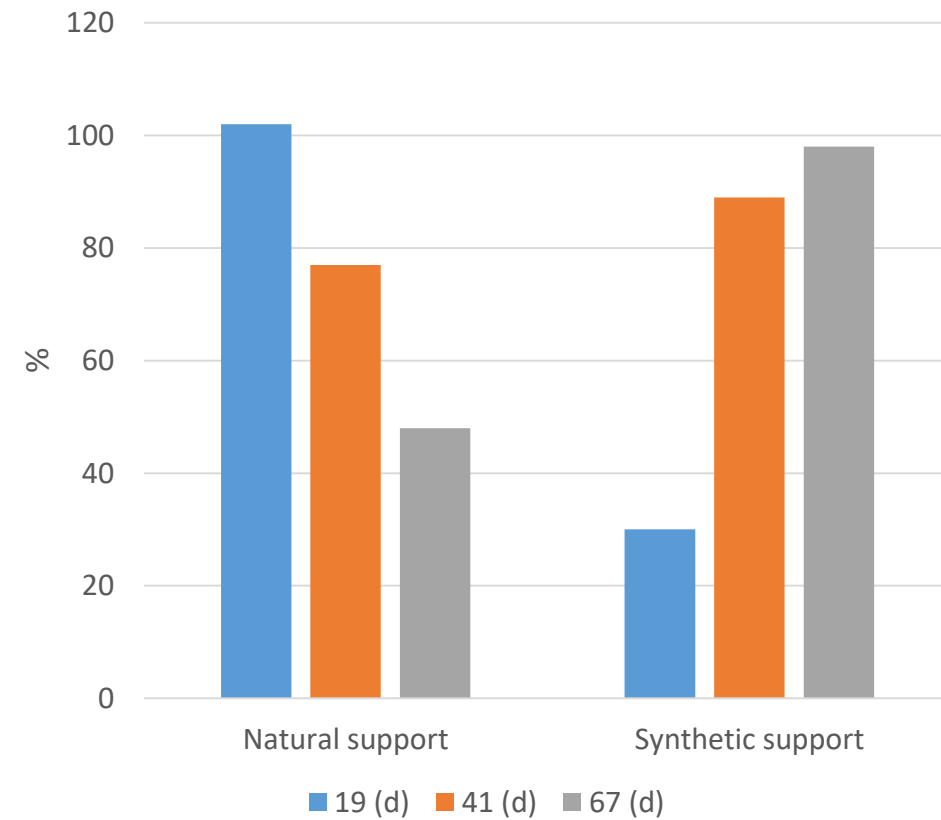
# TARANTO AS PERFECT PLACE:



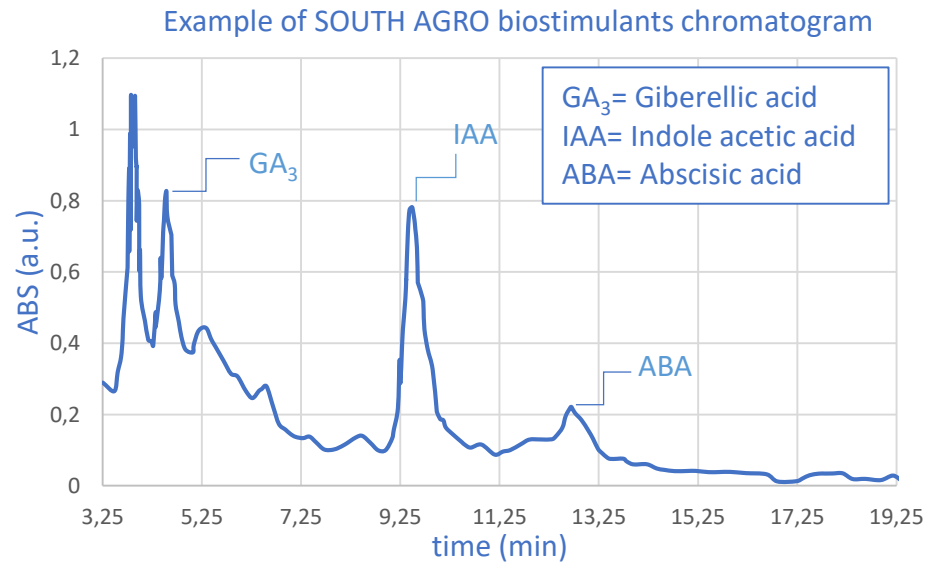
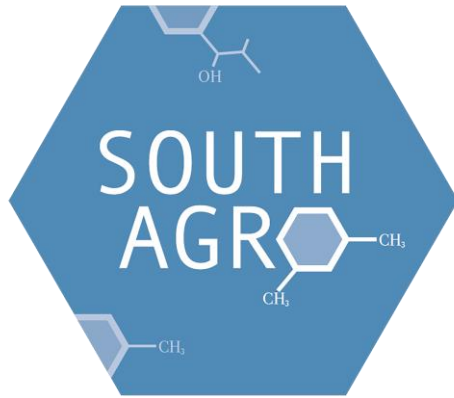
# STEP 1 PHASE ONE:



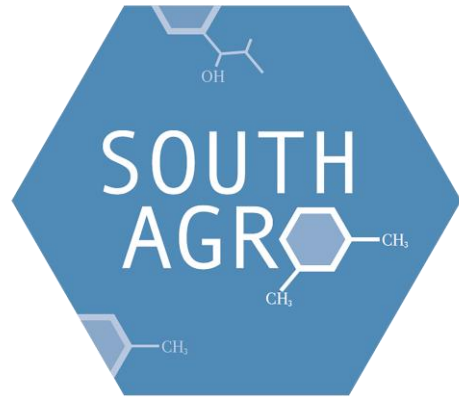
Endemic seaweed cover vs  
implantation technique



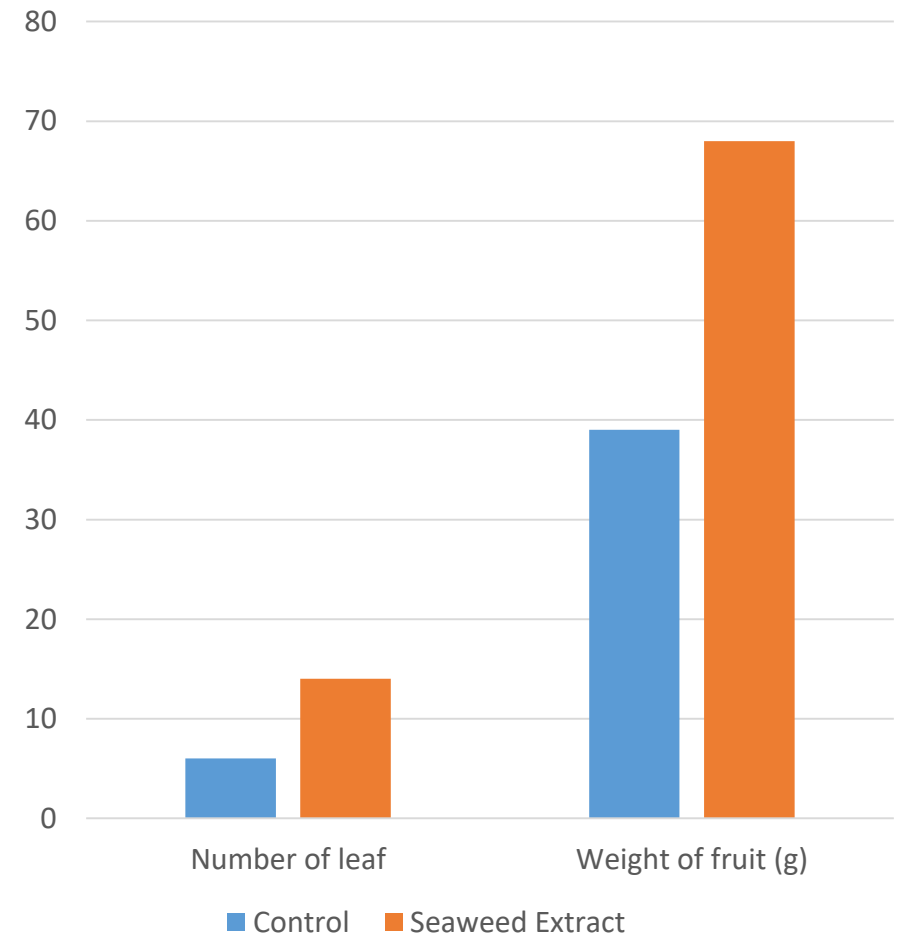
# STEP 2 PHASE ONE:



# STEP 3 PHASE ONE:

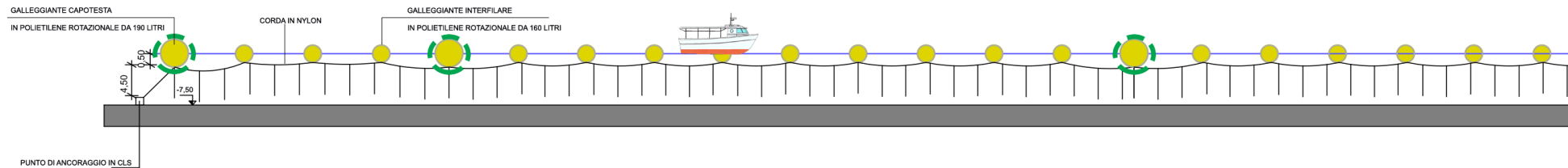
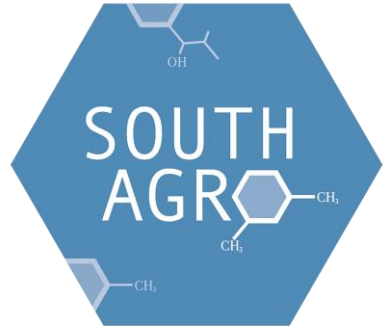


## Solanum lycopersicum open field test



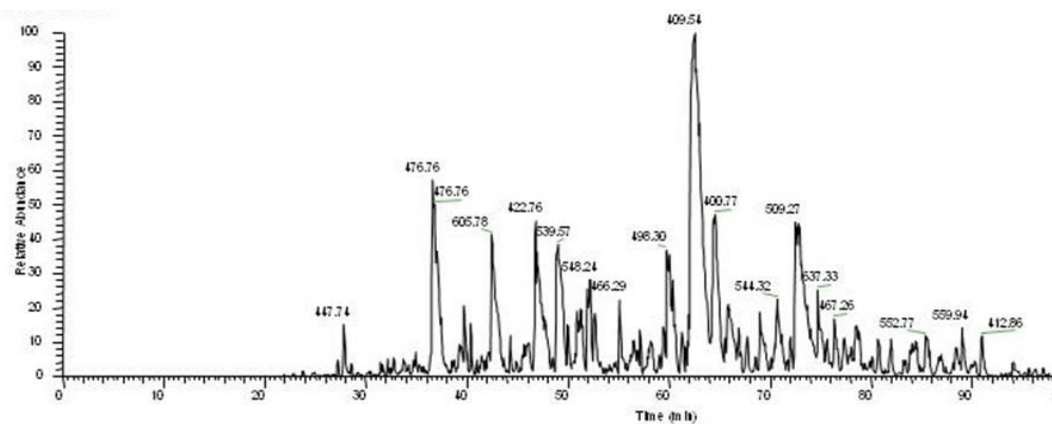
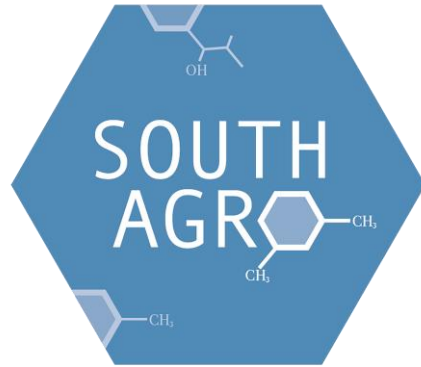


# STEP 3 PHASE TWO:



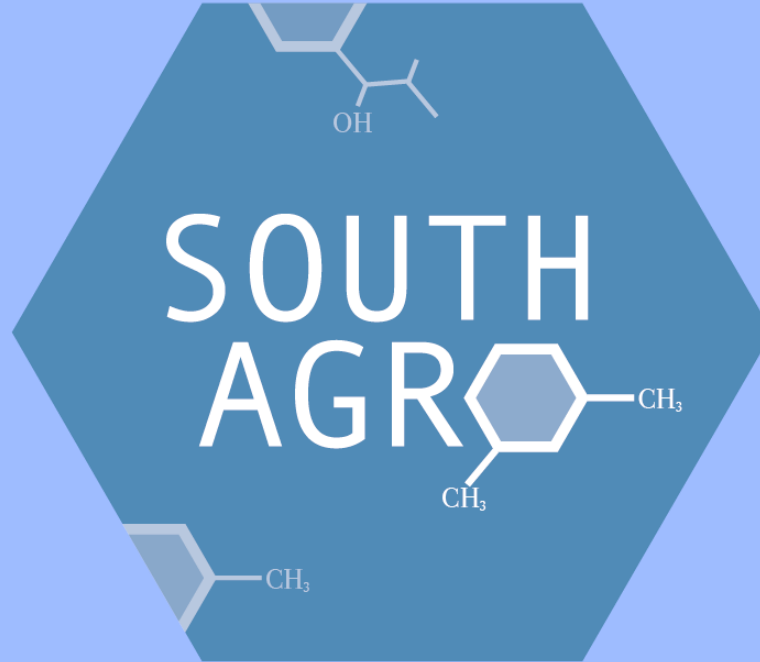


# STEP 3 PHASE 2:





# GRAZIE



«Il mare che nutre la terra»