



HaloSYS

*Integrated system of
bioremediation – biorefining
using halophyte species*

2019 Project Newsletter

HAPPY HOLIDAYS!

Over the past 12 months, the HaloSYS team has delivered fruitful results on project activities. This newsletter provides a snapshot of some of the year's best moments, from first meeting project to hard-nosed greenhouse work. If you find yourself inspired or yearning for more information about our work, we've got you covered – simply visit our website or connect with us on social media!

CONNECT WITH US



www.halosys.eu

UPCOMING EVENTS 2020

CONFERENCES

Partners were able to attend and present HaloSYS activities at a wide range of meetings, workshops and conferences including:

June – Bucharest, Romania

International Conference "Agriculture for Life, Life for Agriculture", organized by the University of Agronomic Sciences and Veterinary Medicine of Bucharest between 4th and 6th June 2020.

4th International Symposium on Horticulture in Europe

5th International Humulus Symposium
8th International Symposium on Human Health Effects of Fruits and Vegetables, 2 – 6 June 2020, Stuttgart, Germany

Eurosoil Congress 2020
24-28 August 2020
Geneva, Switzerland

Currently, the entire world is facing major challenges related to increasing populations that must be fed, depletion of natural resources, impact of environmental factors, and climate changes. All these challenges are important, but food and natural resources shortages are becoming increasingly stringent.

Both external and internal changes put increasing pressure on the sustainability of the agri-food system.

On the other hand, the structure, texture and properties of the soil are deteriorated as a result of intensive conventional agriculture based on the addition of fertilizers, chemical amendments, synthetic phyto pesticide products.

Salt-affected soils cover about 6% of the world's lands, which is mainly due to either natural causes or human-induced causes that affect about 2% (32 million ha) of dryland farmed areas and 20% (45 million ha) of irrigated lands globally.

Salinity is one of the rising problems causing tremendous yield losses in many regions of the world especially in arid and semiarid regions. To maximize crop productivity, these areas should be brought under utilization where there are options for removing salinity or using the salt-tolerant crops.

Methods for salt removal include agronomic practices or phytoremediation. The first is cost- and labor-intensive and needs some developmental strategies for implication; on the contrary, the phytoremediation by halophyte is more suitable as it can be executed very easily without those problems. Several halophyte species including grasses (*Festuca* sp., *Salicornia* sp., *Portulaca* sp., etc.), shrubs (*Rugose rose*), and trees (*Acacia mearnsii*), can remove the salt from different kinds of salt-affected problematic soils through salt excluding, excreting, or accumulating by their morphological, anatomical, physiological adaptation in their organelle level and cellular level. Exploiting halophytes for reducing salinity can be good sources for meeting the basic needs of people in salt-affected areas as well.



Executive Agency for Higher Education, Research, Development and Innovation Funding



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SUSTAINABLE AND RESILIENT AGRICULTURE FOR FOOD AND NON-FOOD SYSTEMS