



NEURICE

Neu commercial European RICE (*Oryza sativa*) harbouring salt tolerance alleles to protect the rice sector against climate change and apple snail (*Pomacea insularum*) invasion

Grant Agreement: H2020 NEURICE 678168
Project Coordinator: Universitat de Barcelona
Start date of project 1st March 2016. Duration 48 months

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Main author	IRTA		
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Outside

This project will bring together experts in diverse fields such as biotechnology (UGLA, UB, CRAG, CIRAD, UMIL, INDEAR and ICS-CAAS), plant physiology (UB, UGLA, IRTA and CREA), farming and agriculture development (IRTA, CAMARA, CFR and CREA), electrophysiology and cell signalling (UGLA) and salinity monitoring systems (IRIS), thereby fostering new opportunities for training and additional collaborative research.

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Inside

Scarcer water availability and sea level rise are some of the climate change effects that clearly contribute to the salinization of the river deltas, where rice is grown in Europe. Most rice varieties are severely injured by abiotic stresses caused by salinisation, with a strong impact on rice production.

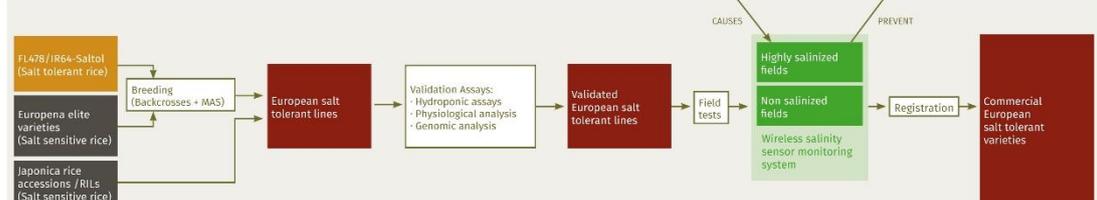
The NEURICE project aims to develop new commercial European salt tolerance rice (*Oryza sativa*) varieties that will protect the sector against the climate change effects.

In addition, the Ebro river delta, in Spain, is affected by the Apple Snail pest that is destroying rice paddy fields and eating the sown seed and the rice seedling. High salt concentrations are harmful for that invasive species. Salt tolerant rice varieties may be a solution for producers, since they will be able to grow in environments safe from apple snail.

The NEURICE project is funded by the Horizon 2020 program, within the call "Sustainable Food Security". It's a four year-long project (2016-2020) that is seeking for novel breeding targets to improve productivity, stability and quality in European rice production.

SPECIFIC OBJECTIVES

- To identify new salt tolerant varieties and new salt tolerance alleles using phenotypical, physiological and genetic screening of germplasm collection and complementary approaches of Genome Wide Association Study (GWAS).
- To obtain advanced lines with improved salt tolerance by introgressing *Saltol*, a chromosome segment carrying a salt tolerance gene from the highly salt tolerant Asian variety FL478 into European elite varieties.
- To evaluate salinity tolerance in controlled conditions using hydroponic systems to validate salt tolerant lines after introgressing salt tolerance genes from FL478.
- To perform field trials to evaluate in salinized and non-salinized conditions the traditional European rice lines harbouring the *Saltol* salt tolerance chromosomal region introgressed from salt tolerant FL478, as well as the most salt tolerant japonica accessions and RILs, in order to select those salt tolerant lines with commercial potential.
- To implement a salinity motorization system in rice plots treated with seawater using a novel autonomous salinity wireless sensor network.
- To transfer the knowledge of the new elite European salt tolerant varieties and the salinity motorization system to the end users.



Contents

1. Outside

Front: Cover with logo

Reverse:

- Text: This project will bring together experts in diverse fields such as biotechnology (UGLA, UB, CRAG, CIRAD, UMIL, INDEAR and HZAU), plant physiology (UB, UGLA, IRTA and CREA), farming and agriculture development (IRTA, CAMARA, CFR and CREA), electrophysiology and cell signalling (UGLA) and salinity monitoring systems (IRIS), thereby fostering new opportunities for training and additional collaborative research.
- Partner contact
- Neurice website and social media

2. Inside

Text:

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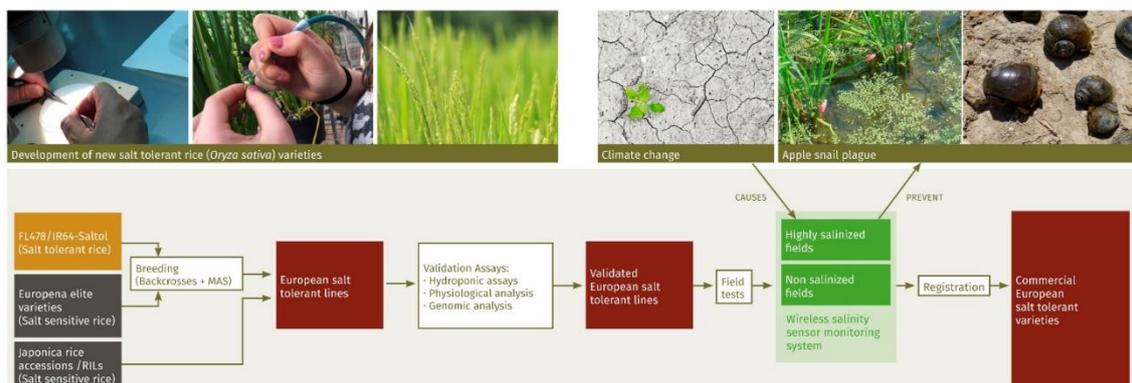
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Figure



Distribution

1.300 copies of the leaflet were printed and distributed among the partners (100 each) to be used in their dissemination activities. It can also be downloaded at <http://neurice.eu/media/>

The leaflet will also be translated in Spanish, Catalan, Italian and French. Files in other languages will be uploaded on the intranet and the webpage.