**Electronic Supplementary Material 1 - *Agronomy***

Halophytes root-associated bacteria and their biofertilizer potential on cash crop Salicornia ramosissima under environmental stressors related to climate change

Jennifer Mesa-Marín 1\*, Jesús A. Pérez-Romero 1, Enrique Mateos-Naranjo 1, Miguel Bernabeu-Meana1, Eloísa Pajuelo 2, Ignacio D. Rodríguez-Llorente 2, Susana Redondo-Gómez 1

1 Departamento de Biología Vegetal y Ecología, Facultad de Biología, Universidad de Sevilla, Seville, Spain

2 Departamento de Microbiología y Parasitología, Facultad de Farmacia, Universidad de Sevilla, Seville, Spain

**\*** Correspondence: jmesam@us.es

**Supplementary Table 1.** Gram staining, motility, NaCl tolerance and Plant Growth Promoting properties of the 43 rhizobacteria isolated from *Halimione portulacoides* in Piedras salt marsh (SW Spain). Strains selected to stablish the *consortium* appear highlighted in grey colour.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strain |  | Gram staining |  | Motility |  | Salt tolerance (NaCl %)a | |  | Plant Growth Promoting properties | | | | | |
| **28ºC** | **40ºC** | **Nitrogen fixationb** | **Phosphate solubilizationc** | **Siderophores productionc** | **Auxines production**  **(mg/ml)** | **Biofilm productionb** | **ACC deaminase production (µmoles mg-1 h-1)** |
| **HPJ1** |  | - |  | + |  | 10 | 6 |  | - | - | 9 | - | - | - |
| **HPJ2** |  | - |  | + |  | 6 | - |  | + | 12 | 30 | 4,13 | + | 1,86 |
| **HPJ3** |  | - |  | - |  | 10 | 6 |  | + | - | 10 | 1,56 | - | - |
| **HPJ5** |  | - |  | - |  | 1 | - |  | - | - | 30 | No growth in TRPd | - | - |
| **HPJ7** |  | + |  | - |  | 10 | 6 |  | - | - | - | No growth in TRPd | - | - |
| **HPJ8** |  | - |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ9** |  | + |  | + |  | 10 | 10 |  | + | 10 | 20 | - | + - | - |
| **HPJ10** |  | + |  | - |  | 1 | - |  | + | 10 | - | - | - | - |
| **HPJ11** |  | - |  | - |  | 10 | 6 |  | + | - | - | - | - | - |
| **HPJ12** |  | + |  | - |  | nd | nd |  | - | - | - | - | - | - |
| **HPJ15** |  | - |  | - |  | 10 | 10 |  | - | - | 12 | 15,41 | - | - |
| **HPJ19** |  | - |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ20** |  | + |  | - |  | 6 | 6 |  | - | - | - | No growth in TRPd | + + | - |
| **HPJ21** |  | + |  | - |  | 10 | 6 |  | + | 12 | - | 3,19 | - | - |
| **HPJ22** |  | + |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ25** |  | + |  | - |  | 10 | 10 |  | + | 10 | - | 0,68 | - | - |
| **HPJ26** |  | - |  | - |  | nd | nd |  | - | - | - | - | - | - |
| **HPJ27** |  | + |  | + |  | 1 | - |  | - | - | - | 2,16 | + - | - |
| **HPJ28** |  | - |  | - |  | nd | nd |  | - | - | - | No growth in TRPd | - | - |
| **HPJ30** |  | + |  | - |  | 10 | 6 |  | + | - | - | - | - | - |
| **HPJ31** |  | + |  | - |  | 10 | - |  | - | - | - | No growth in TRPd | - | - |
| **HPJ32** |  | - |  | - |  | 6 | - |  | - | - | - | - | - | - |
| **HPJ34** |  | - |  | - |  | nd | nd |  | - | - | - | - | - | - |
| **HPJ36** |  | + |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ37** |  | + |  | - |  | 1 | 1 |  | + | - | - | - | - | - |
| **HPJ38** |  | + |  | - |  | 6 | 6 |  | - | - | - | - | - | - |
| **HPJ40** |  | + |  | + |  | 10 | 10 |  | + | 11 | 15 | - | + + | - |
| **HPJ41** |  | - |  | - |  | 6 | 1 |  | + | - | - | 0,82 | - | - |
| **HPJ42** |  | - |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ43** |  | + |  | + |  | 1 | 1 |  | - | 11 | 15 | 0,83 | + - | - |
| **HPJ45** |  | + |  | - |  | 1 | 1 |  | - | 10 | 13 | - | - | - |
| **HPJ47** |  | + |  | - |  | nd | nd |  | nd | nd | nd | nd | nd | nd |
| **HPJ48** |  | + |  | - |  | 1 | 1 |  | - | - | - | 3,65 | - | - |
| **HPJ49** |  | + |  | + |  | 10 | 10 |  | + | 11 | 13 | - | + | - |
| **HPJ50** |  | + |  | + |  | 6 | 6 |  | + | 9 | 20 | 7,48 | + | - |
| **HPJ52** |  | + |  | - |  | 10 | 6 |  | + | - | 18 | - | + - | - |
| **HPJ53** |  | + |  | - |  | 10 | 10 |  | + | 10 | - | - | - | - |
| **HPJ54** |  | + |  | + |  | 1 | 1 |  | + | - | - | 0,82 | - | - |
| **HPJ55** |  | + |  | - |  | 10 | 6 |  | + | 11 | - | 1,41 | - | - |
| **HPJ56** |  | - |  | - |  | 1 | - |  | - | - | 13 | - | - | - |
| **HPJ57** |  | + |  | - |  | 1 | 1 |  | + | - | - | - | + | - |
| **HPJ58** |  | - |  | - |  | 1 | - |  | + | - | - | - | - | - |
| **HPJ60** |  | + |  | - |  | 10 | 6 |  | + | - | 9 | 0,85 | - | - |

a Results are expressed in % of NaCl of the medium (1 % = 0,2 M NaCl, 6 % = 1,2 M NaCl, 10 % = 2 M NaCl).

b Results are expressed by presence or absence of visible growth.

c Results show the diameter of the halo in mm.

d TRP: nutritive broth amended with L-tryptophan, employed for IAA determination (Mesa *et al.*, 2015a).

nd: not determined.