

Novel lactic acid bacteria strains as inoculants on alfalfa silage fermentation

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**Table S1.** Characterization of lactic acid bacteria isolated from non-wilted and wilted alfalfa silages

| Isolate ID                  |                | 3.7 E                                    | 14.7 SE                                 | 14.15 SE                                 |
|-----------------------------|----------------|--|---|--|
| Identification              |                | <i>Lactobacillus</i><br><i>plantarum</i> | <i>Lactobacillus</i><br><i>pentosus</i> | <i>Pediococcus</i><br><i>pentosaceus</i> |
| Access number               |                | MH924275                                 | MH924298                                | MH924301                                 |
| Control condition           | MRS/37°C       | +++                                      | ++++                                    | +++                                      |
| Temperature (°C)§           | 15             | +  | +                                       | +  |
|                             | 45             | -  | +                                       | +  |
|                             | 3.5            | +  | +                                       | +  |
| pH§                         | 4              | +  | +                                       | +  |
|                             | 4.5            | +  | +                                       | +  |
|                             | 8.5            | +  | +                                       | +  |
| g/L NaCl§                   | 40             | +  | +                                       | +  |
|                             | 65             | +  | +                                       | +  |
| CO <sub>2</sub> *           |                | Ho                                       | Ho                                      | Ho                                       |
| 1†                          | Radius of      | ++                                       | ++                                      | ++                                       |
| 2†                          | inhibition‡    | ++                                       | ++                                      | ++                                       |
| 3†                          |                | ++                                       | ++                                      | ++                                       |
| pH                          | After 24h      | 4.18                                     | 4.12                                    | 4.25                                     |
| Metabolites<br>(g/kg of DM) | Lactic acid    | 14.9                                     | 15.1                                    | 13.3                                     |
|                             | Acetic acid    | 3.1                                      | 2.8                                     | 1.9                                      |
|                             | Propionic acid | 0  | 0.1                                     | 0.2                                      |

§: Growth measured by optical density (630 nm) - = Absence of growth; + = Presence of growth;

\*Ho: Homofermentative; He: Heterofermentative; †: Indicator microorganisms of the antimicrobial test. 1- *Listeria monocytogenes* 19117; 2- *Listeria monocytogenes* 7644; 3- *Escherichia Coli*; ‡: (mm) : - (absence of inhibition halo), + (> 4 and ≤ 15), ++ (> 15 and ≤ 30), +++ (> 30).