RHIBAC — Rhizobacteria for reduced fertiliser inputs in wheat

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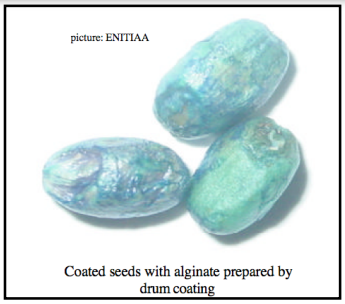
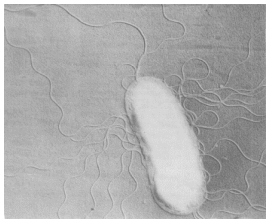
RHIBAC (www.rhibac.org) is funded by the FP6 programme of the European Union to research the mechanisms of plant growth promotion by rhizobacteria applied onto wheat.

OBJECTIVE: development of **rhizobacteria inocula** to promote growth in wheat and reduce requirement for chemical inputs, for European and South America soils.



ENITIAA prepare **alginate-starch beads** as inoculants carrier for plant growth promoting rhizobacteria and search matrix formulations to maximize shelf life of the rhizobacteria in storage conditions (Fig. 3). **Seed coating** is considered the most attractive mechanisms for commercial application, because requiring little intervention from farmers.



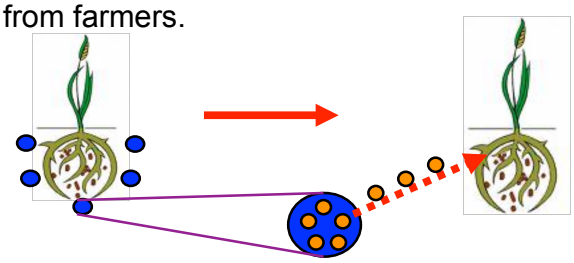


FIG. 1. Bioencapsulation of live rhizobacteria in a polymer matrix could assist plant growth promotion, supporting rhizosphere colonization or acting as a reservoir **to release bacteria into the soil**.

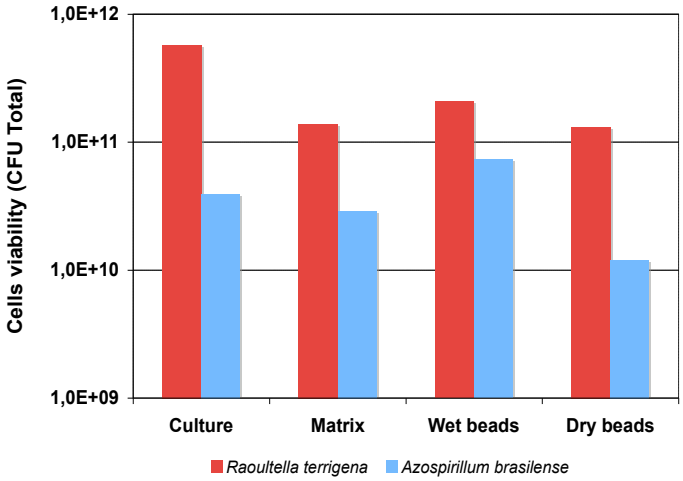


FIG. 2. Cells viability of *R. terrigena* TFi08, *A. brasilense* Sp245 in each part of bioencapsulation processs. Counts over 10^{10} CFU Total, represent one logfold higher than classical products.

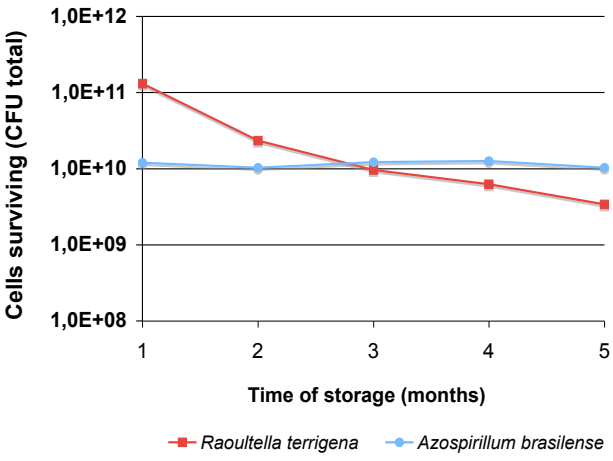


FIG. 3. Alginate-starch encapsulated and dehydrated *A. brasilense* Sp 245 and *R. terrigena* TFi08.
The storage of *A. brasilense* in alginate-starch beads, led to viable count the same initial cells concentration after 5 months at 4°C.

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