

Production and survival during storage of spray-dried *Bradyrhizobium japonicum* cell concentrates

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Abstract

Production of *Bradyrhizobium japonicum* cell concentrates by spray-drying in skim milk plus sucrose medium and the feasibility of storing dried inocula over long periods were investigated. Storage of spray-dried cells under mild vacuum was equivalent to storage under nitrogen. Oxygen and ambient temperature were found detrimental for survival of dried cells. High initial cell concentration and storage under low relative humidities (< 23% RH) at 4°C increased the longevity of the inocula (> 10⁹ cfu g⁻¹ during at least a 25 week storage period) without altering the symbiotic properties of *B. japonicum*.