

The Potential of Inulin Crops in South Italy

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Abstract

Chicory and Jerusalem artichoke are among the best crops for inulin production (Meijer and Mathijssen, 1993); this is the reason why they are increasingly attracting the attention of research.

Inulin and other polyfructosides are mainly used for the production of high-fructose syrups (Chubey and Dorrell, 1977) and other food purposes (Spiegel et al., 1994) but also for the production of ethanol and in the non-food industry (Fuchs, 1987).

This work reports on field trials conducted over a 2-yr period (1999-2000) on chicory and Jerusalem artichoke in south Italy at Policoro (40° 13' N, 16° 45' E, 15 m a.s.l.), a typical Mediterranean area, within the framework of the research project "Crops for inulin production: modelling of the environmental effects and cropping strategies", funded by the Italian Ministry of University Scientific and Technological Research (MURST).

The aim of the study was to determine the biomass and carbohydrates' dynamics of plants, and define the most suitable growing techniques for the highest inulin production.

The main agronomic factors (irrigation and harvest time) were investigated.

The potential crop yields were influenced by the growing techniques tested, and promising results were achieved especially in terms of inulin quality.