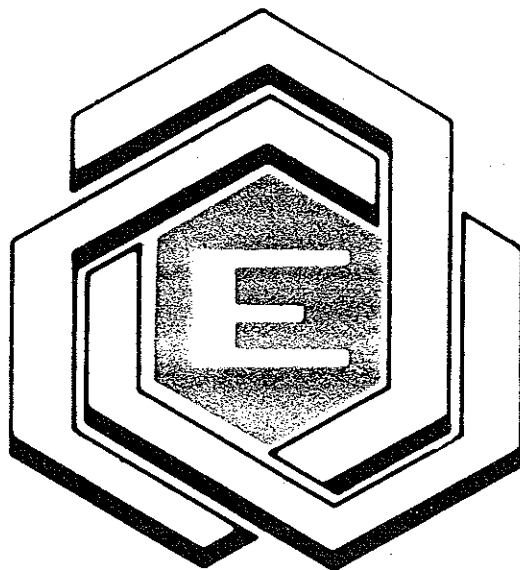


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NITRATE AND NITRITE CONTENT OF SOME VEGETABLES FARMED BY BOTH CONVENTIONAL AND ORGANIC METHODS

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The quality of fruits and vegetables depends on several parameters, such as sensorial characteristics, appearance and firmness, nutritive value and safety of use. Safety of use is related to the presence in the product of both environmental pollutants (pesticide residues, heavy metals) and natural substances that may show antinutritive or toxic effects and therefore contribute to lower the dietetic value of the product. Nitrates play an important role among the substances of the latter category. Plants take up most nitrogen as nitrate ion; the subsequent nitrate accumulation in the plant depends on several factors, in particular the nitrogenous manuring. Other factors that may play a role are the farming season and farming type (in the open field or in a hothouse). Nitrates may be reduced to nitrites during transport, storage and culinary preparation. Nitrites may react with aliphatic amines to give cancerogenic nitrosamines.

In this paper the results relative to nitrate and nitrite content of some vegetables from farms of the Friuli-Venezia Giulia region are presented. A comparison between products farmed by both conventional and organic methods has been made. The products to be analyzed have been picked at the same time from neighbouring farms in order to reduce to a minimum the influence on nitrate and nitrite content of factors such as climate, soil type and composition, time and conditions of harvest, stage of maturity, physiological age of the plant.

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