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A Traceability Index for Food

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Abstract : This paper defines and develops the notion of a traceability index for food and may be used by any consumer (restaurant, distributor, average consumer etc.). The concept is then extended to a region's food system as a way to measure how well a regional food system utilizes its own bounty or at least, is connected to its food sources. With increasing emphases on the sustainability of aspects of regional and ultimately, the global food system, it is reasonable to accept that if we know how close (in relative terms) an end-user of a set of ingredients (as they traverse through the maze of supply chains) is from the sources, we may be better equipped to evaluate the quality of the set as measured by any number of qualitative and quantitative criteria. We propose a mathematical model which may be adapted to a number of contexts and sizes. Two hypothetical cases of different scope are presented which highlight how the model works as an evaluator of steps between an end-user and the source(s) of the ingredients they consume. The variables in the model are flexible enough to be adapted to other applications beyond food systems.

Keywords : food, traceability, supply chain, mathematical model
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