



Deutscher Tropentag, October 11-13, 2005, Hohenheim

“The Global Food & Product Chain—
Dynamics, Innovations, Conflicts, Strategies”

Consumers' Attitude and Farmers' Situation with Regard to Agricultural Production with Treated Wastewater in the Northern Gaza Strip

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Abstract

The use of recycled water in agriculture is a crucial element within the framework of integrated water resources management (IWRM) in water-scarce areas, since agriculture consumes the major share of freshwater and thus provides the largest potential for replacing freshwater. This situation holds also for the Gaza Strip, where the prospect of new political and administrative realities nourishes expectations of a new set-up in water resources management in the near future. Changes in water distribution and use are likely to cause changes in agricultural production and the socio-economic carrying capacity of the agricultural sector. A hitherto little known element in the equations is the attitude of producers and consumers towards the use of recycled water. Opinion polls on this subject were carried out in Gaza city and the northern part of the Gaza strip in 2004. The results allowed for a conjoint analysis on characteristics of agricultural products that determine consumers' purchase decisions and the identification of farming systems that are likely to be most affected. Results showed that irrigation water quality has a significant impact on consumers' decision-making irrespective of the type and preparation of products for human consumption. This holds in particular in consumer layers with higher incomes and a comparable high degree of education. Labelling of products with regard to their origin is thus a promising approach for diversified marketing and a potential tool for improving farmers' economic success and the related socio-economic carrying capacity of rural areas. Changing qualities of irrigation water will affect in the first place farming systems that rely predominantly on annual crops since the concerned families depend on their farm income to a much higher degree than families with a significant share of perennial operations in their farm component. The applied methodology allowed for the quantification of these effects and thus contributed operational knowledge to the ex-ante modelling towards impact analyses of effects from potential alternatives in the future organisation of water management in the Gaza Strip.

Keywords: Conjoint analysis, consumers' preferences, farming systems, integrated water resource management, marketing, treated wastewater