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Safe salad – Is it possible to produce safe baby leaves?**Lars Mogren**

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Statement of the Problem: Vegetables are an essential component of a healthy diet. During the last decades, outbreaks of foodborne illnesses have increasingly been linked to fresh and/or minimally processed vegetables. Shigatoxin producing *E. coli*, causing EHEC infections, has been the causal agent for major outbreaks both in Sweden and abroad with leafy vegetables and sprouts. This pathogen is particularly severe due to its severe symptoms and low infectious dose. The major source for contamination is associated with animal or human feces. Contamination can occur in the entire farm-to-fork chain and failure during preharvest may not be counteracted by processing. This project focuses on the whole chain from production to consumer regarding baby leaf crops.

Methodology & Theoretical Orientation: A four year project is called “Safe Salad”. It is including several research groups and applies a novel and unique approach, as it focuses on the vector, namely the plant and its microflora. It uses a comprehensive approach from farm to fork. Studies include interactions between cropping and processing environment and the leaf microflora and the prevalence of EHEC are used as a basis for risk assessment and identification of risk factors before harvest and of vegetables at risk. The impact of nitrogen supply to the crop is highlighted. Explanatory models for adhesion on the leaf via the existing biofilm and the significance of the leaf microflora for disease development is studied in animal trials.

Conclusion & Significance: The main conclusion is that there are no single way to prevent and exclude *E. coli* reaching the farm to fork chain but there are several methods to reduce the risks at critical stages.

Biography

Lars Mogren has a background in horticulture and produce quality. His main focus has been the role of pre-harvest factors on post-harvest quality of field grown vegetables. He is Coordinator of a four year research project called safe salad which includes field and greenhouse trials, laboratory analyses, intervention studies and risk assessments.

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