

GeoQuality

Geographical information system based model for quality assurance in feed primary production

Background

The feed primary production represents one link within the food chain, the quality assurance of which has become increasingly important both publicly and legally. Clearly, the transfer of contaminants from the soil to the feed plant is influencing the feed quality and, thus, via the animal the exposure of the consumer to these contaminants. This transfer from soil to plant has to be under closer control.



Main Targets

The overall objective is to reduce or prevent the exposure of the consumer to contaminants originating from soil. This means

- to improve the knowledge related to contaminants originating from soil and their cycle in the feed and food chain.
- to propose solutions to the feed primary producers (farmers) to prevent or reduce locally the risk of contaminants' load in food plants.
- to develop guidelines for regional authorities to undertake risk oriented feed control.

Target Groups

Farmers, Feed inspectors, Policy makers, Farm advisors, Land sale

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Acronym	GeoQuality
Title	Geographical information system based model for quality assurance in feed primary production
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Duration	February 2006 – October 2007
Project approach	<ul style="list-style-type: none"> • Combining existing data to develop a internet-based geographical information system (GIS) classifying areas locally according to their contaminants' load, and providing preventative measures. Cd is used as example element in a pilot region of NRW. • Cu cycle in soil and plant is investigated in detail using the olive tree as example. It takes into account management systems (conventional, organic), choice and kind of application of pesticides (containing Cu), and final Cu content in soil and food. • Models are developed to describe the transfer of contaminants not only from soil to feed plant, but also from feed plant to animal and its organs.
Expected results and outputs	<ul style="list-style-type: none"> • Promotion of technology and knowledge transfer related to soil born contaminants. • A GIS for Cd and locally in NRW a tool that can directly be used by farmers/farm advisors to prevent or reduce soil born Cd contamination in feed. Similarly, it is a tool for the official feed control to be more risk-oriented in that region. • Identification of critical control points in the cycle of contaminants using Cu as an example. • More reliable forecast of the final contaminant concentration in the food originating from animals from a given soil contamination.