Statistical Aspects of GMO Detection in Conventional Seed Lots. (C04-kruse070617-Oral)

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Abstract:

In the EU, GMO-thresholds between 1 and 0 % are under discussion for conventional seed lots. Sampling schemes and testing methods applied are expected to detect and quantify a GMO presence in a conventional seed lot accurately so that in case of a re-test the decision about the seed lot will be confirmed without exception. However, since the thresholds will be very low and sampling as well as testing methods are associated with unavoidable errors, statistical analyses of the test situation are essential. By means of examples the following questions will be addressed: What is the best reference for a threshold, should it be made on a seed basis or on a haploid genome basis? What is the reliability of a test result in the case of a heterogeneous presence of GM seed in the seed lot, how could the sampling schemes be changed to improve the reliability in such cases? What positions are put forward from the different parties involved towards the definition of the statistical risks in GMO testing for consumer and producers and what are the consequences of the different definitions for the optimum test design?

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