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## Measuring of cross contamination in feed processing

**Jovanka Levic, Slavica Sredanovic, Olivera Đuragic, Đuro Vukmirovic, Radmilo Colovic, Dušica Ivanov, Bojana Kokic**

University of Novi Sad, Institute of Food Technology, Bulevar cara Lazara 1, Novi Sad, Serbia

E-mail: [jovanka.levic@fins.uns.ac.rs](mailto:jovanka.levic@fins.uns.ac.rs)

**Abstract** The industrial compound feed sector is a significant link in the production chain of food products from animal origin. Producing safe feed and food products is first and foremost question of good management practices at each stage of the feed and food chain from primary production to final processing. It is therefore the responsibility of all operators in the feed & food chain to implement good practices to ensure the safety of the goods they produces.

Modern feed processing industry is expected to place on market a wide range of products, even those produced according to the farmer's own formulation. Frequent changes of formulations and recipes prevailing in this market driven production, contribute to threats originated in technological process. Beside other factors, insufficient feed mix homogeneity, carry over and cross contamination are the potential risks in feed production critical to ensure the safety of consumers.

Carry over is the potential risk in feed production critical to ensure the safety of consumers. According to definition in EFMC, Carry-over is the contamination of a material or product with another material or product that originates from previous use of equipment. Several factors may influence the level of carry-over in a feed mill: the installation itself (the equipment of the facilities), the substance itself (depending on adhesive strength, electrostatic properties and the size and density of the particles) and the measures that are taken to control carry-over (Feil, A. 2009). Absolute carry-over free production of compound feed is impossible considering the technical aspects. Analysis of carry-over at selected points in the manufacturing chain can provide useful informations for corrective measures toward the minimizing of contamination risk

Control of carry-over must always be considered within the HACCP study. Attention should be paid to each additive, added separately or in the form of a premixture. Each part of the production, loading and delivery processes must be considered in the HACCP study. Specific attention must be paid to the plant design, the dust management, the cleanliness of equipment and scheduling.

The feed producer in EU and many other countries must furnish the appropriate authority with the prove of the mixing and working accuracy of the plant. Working accuracy of production line for premix or compound feed, respectively, is characterised regarding:

Nominal value of additive concentration

Homogeneity and stability of the mixture

Cross-contamination in following batches

The objective of this paper was to demonstrate methods and show the results achieved for homogeneity, carry over and cross contamination in compound feed plant.

**Keywords** feed;cross contamination;testing