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TITLE

MICROGRANULATED PREMIXES IMPROVE SAFETY OF MEDICATED FEED BY LESS DUST CONTENT

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CONTENT

Background and objectives

The extent of carry-over and the following risk of cross-contamination of medicated premixes depend on the feed mill installation and the product features, such as the formulation and the active. The dust content of a premix is closely correlated with this extent of carry-over. The dust index (mg dust per 100 g product) of three premixes of the benzimidazole group of anthelmintics for pigs was determined.

Material & methods

Two tested formulations were powders based upon simple mixtures; a 40 mg/ g fenbendazole premix and a 50 mg/ g flubendazole premix. The third formulation was Pigfen® 40 mg/ g fenbendazole premix (Huvepharma®), developed by a unique microgranulation technology. This ensures that fenbendazole is captured in microgranules which are fully embedded in a matrix of starch. The dust index was determined according to the Stauber-Heubach method. A premix sample was fed into a rotating drum and moved at constant conditions. A vacuum pump drew air through the drum and a separator was placed downstream to separate the coarse particles. Dispersible particles passing through this separator were collected on a filter in an air filtration unit and weighed. Each test covered 4 separate measurements. Results are shown in form of the mean value of the individual measurements.

Results

The dust index of the flubendazole and fenbendazole powder premixes were respectively 39.4 and 12.2 mg dust per 100 g premix. On the other hand, for the microgranulated Pigfen® premix a dust index of 3.2 mg dust per 100 g premix was determined.

Discussion & conclusion

The formulation of a premix plays a crucial role in the dust content. Compared to simple mixtures, microgranulated premixes demonstrate a lower dust index and reduce significantly the risk of carry-over and cross-contamination. This results in better feed safety.