

Good reasons for staying dry with methionine

Two thirds of global methionine consumers prefer dry methionine sources over liquids.

The main four reasons support this industry trend:

1. better dosing accuracy
2. superior miscibility
3. shorter batch cycle time
4. less maintenance and cross contamination.

With feed production the batch mixing process is the key process to control quality and cost. 95% of ingredients in this process are added as dry bulk which is best suited to adapt particle size distribution to the needs of animal species. Consequently, it is dry bulk that the dosing and mixing process is optimized to handle.

Well proven and efficient technology is widely available to the industry for dosing and weighing major, minor and micro ingredients. As dry bulk batches are assembled on scales while the previous batch is being mixed, the process is best balanced between throughput and accuracy.

Dry ingredients have the full mix cycle time to reach proper homogeneity, as opposed to liquid additives that are sprayed onto the mash within the mix cycle, significantly shortening the average mix time for liquid additives (Figure 1).

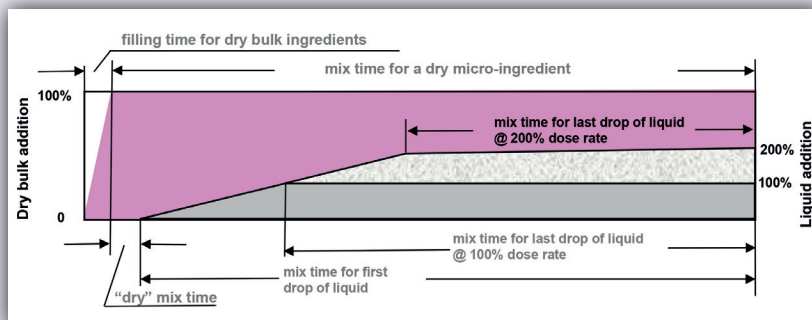


Figure 1: impact of liquid addition on mix cycle time

As mix time is decisive for mix quality, average results of mix homogeneity of dry bulk methionine are superior compared to liquid MHA. An even supply of essential nutrients surely has positive effects on animal performance.



Figure 2: build-up of caking inside mixer



Figure 3: corrosion on mixer cover due to caking

Whenever liquids are added into the batch mixer they tend to form lumps with dry ingredients - which increases particle size and impairs miscibility. Even worse, build-up of powder-liquid cakes on mixer walls and mix tools are promoted (Figure 2), with spraying systems not well adjusted or maintained or spray time not well segmented. This leads to carry-over of nutrients and eventually medication into following batches, whenever lumps or crusts break off. To prevent this, additional maintenance is required, namely with acidic liquid ingredients like MHA causing corrosion of mixer covers and troughs. (Figure 3)

Feed millers prefer staying dry with methionine for convincing reasons: for peace of mind with regard to production accuracy and cost, in other words, for an improved bottom line.



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