



State of California  
Department of Food and Agriculture  
Safe Animal Feed Education Program

## Equipment

*A feed that is not a homogenous mixture can affect animal performance and out-of-tolerance medicated feed assessments, required by good manufacturing practices for a feed mill license.\**

## Mixer Efficiency

### Objective:

To ensure the mixer is functioning within the proper range; meaning that the coefficient of ingredient variation is no more than 10% throughout the product.

### Person Responsible:

Plant Manager or Designated Employee

### Procedure:

To test the mixer efficiency there will be 2 separate tests completed. One of these is an in-house test in which the designated person takes samples and sends them to a predetermined lab for analysis, the other is a third party validation test in which state officials come and sample and then have the state lab analyze the sample.

### In-house test:

You will need; 10 sample bags and label them with the name and formula of the feed, the date, and a number (1-10) so that the samples can be distinguished after being taken.

Sample a formula feed that contains a low inclusion ingredient, a high inclusion mineral/ingredient, and a protein ingredient. Ex// Assay could be protein, calcium, copper, and moisture

Utilize an opening that can safely be opened and is as close to the mixer as possible.

Sampling can begin after the last ingredient has been added and the total dry and wet mixing time has been completed.

Decide on a time interval that will allow you to obtain a minimum of 10 evenly spaced samples.



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Collect samples beginning with bag 1 and moving on until you have finished with bag number 10.

Once all of the samples have been collected the plastic bags should be sealed and sent to a 3<sup>rd</sup> party lab for analysis.

### Third Party Testing:

Third Party testing will be done by the California Department of Food and Agriculture. This testing can be done with a medicated feed so that drug levels can be tested.

### Frequency:

A mixer study will be completed by a third party annually.

An in house mixer study will be completed quarterly.

### Corrective Action:

Corrective actions will be documented when:

A mixer study has not been completed in accordance with this document. A sampling date will be scheduled as soon as possible.

If the coefficient of variation exceeds 10%, the plant manager is responsible for either reformulating, altering the production method or mixing time until the variation is within tolerance.

In the event of an out of tolerance assay the mixer will be inspected to ensure that all moving parts are within established specifications and properly maintained.

Out-of-tolerance assays are not kept for follow up investigations or investigations of an out-of-tolerance assay does not occur.

### Related Documents:

Quality Control Sampling Schedule

*\*2014 Feed Additive Compendium*