



CONSISTENCY & QUALITY OF DRY INGREDIENTS

## ENSURING FINISHED FEED QUALITY

Finished feed quality, appearance, and shelf life is directly impacted by dry ingredient quality, consistency, and mix composition. Also, processing of corn, pellet quality, and the presence of fines greatly affect finished feed moistness, color, sheen, and handling characteristics.

### QUALITY & CONSISTENCY OF DRY INGREDIENTS

- Uniformity of particle size, amount of fines, and moisture level impact consistency of finished feed appearance
- Presence of heavy dust and /or soil in one ingredient will lessen nutritive value and sheen of finished grain mixes, and can reduce palatability and intake of finished feeds
- Notable presence of weed seeds, chaff, insects, and small bits of stover in grains will detract from finished feed eye appeal
- Sample collection, review, and traceability of incoming ingredient shipments enhances long-term consistency of finished feeds
- Uniform grain temperature helps consistency of handling and appearance of finished feeds. Cold grains may “shed” coating product application, resulting in a dark, sticky finished product. Warm grains have greater absorption, creating a drier finished feed appearance.

### MIX COMPOSITION

- Establishing economic, quality, appearance, and shelf life goals for a finished feed can allow for formulation flexibility while enhancing long-term product consistency
- Variation in inclusion rate of ingredients with large particle sizes greatly affects feed appearance
- High levels of meal-type ingredients reduces overall feed moistness and appearance
- Growing, harvest, processing, and economic conditions may impact the availability and consistency of a necessary ingredient for a grain mix. Adjustments to mix composition, preservative inclusion, palatability enhancement, or coating product application may be needed to maintain consistency of finished feed appearance.



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## **FINES FROM DRY INGREDIENT SOURCES:**

- Negatively affect finished feed moistness and uniformity.
- Remove if possible after processing.
- Absorb an inconsistent amount of coating product, resulting in “molasses” balls; disturbing the feed appearance and consistency.
- May create dustiness concerns in finished feeds

## **STEAM FLAKED CORN:**

- If excess moisture is not removed, feed shelf life and stability are decreased.
- Flake density, particle size, and consistency affect finished feed appearance.

## **DRY CORN:**

- Process to balance economics, desired appearance, handling, storage, shelf life, and nutrient availability/ digestibility rate for the animal
- Larger particle size retains more molasses on the outside of kernels, giving a darker finished feed appearance
- Low bushel weight corn will be more prone to breakage and production of fines, which cause finished feed to have a drier appearance

## **PELLETS:**

- Should resist absorbing molasses.
- Kept cool and free of fines.
- Limit handling during manufacturing to limit new fines.
- Routine monitoring of pellet durability index (PDI)
- Target and maintain a pellet durability index (PDI) >90%

