Ingredient Receiving and Sampling

Sampling

- *Equipment*: Equipment used to provide a representative sample include grain probes and sampling triers. The probe should be closed when inserted into the product and then twisted to reveal holes, allowing grain to flow in.
  - The length of the tool should reach the bottom of the container being sampled.
  - Larger diameters should be used for whole grain ingredients and smaller diameters used for ground ingredients.
  - Cut stream sampling from free-flowing ingredients should use pelican or PVC pipe samplers.
- *Visual Inspection:* The samples' odor and visual appearance can help decide quality and basis of rejection of some products. Take a sample prior to unloading where the receiving pit cover remains in place and a small amount of ingredient is let out onto the cover.
  - Using a reference sample with known characteristics to compare to ingredient sample at receiving is helpful in deciding if further analysis is necessary, based on product color, texture, and odor. If ingredients have visual deviation from reference sample, further analysis should be considered.
  - Poor visual inspection does not always mean poor quality ingredients but should be further investigated.
- *Representative sample*: A representative sample for free-flowing and static material can be obtained by either timed collection every 1 to 5 minutes during the unloading process or strategically sampling at predetermined locations of bags or bulk containers.
  - The sample should be taken in the middle of the load and stream flow may need to be reduced while collecting to prevent overflow of the sampler equipment.
  - Collection from free-flowing material should be a side-to-side sweep of the sampler, collecting the entire stream.
- *Sample Labeling and Storage:* Labeling should include a minimum of sampling date, ingredient name, lot ID, and sampler identification. Retained samples should be kept at minimum while the ingredient is being used and depending on the associated risk of spoilage or disease thereafter.

Receiving procedures

- *Truck inspection*: Prior to accepting an ingredient, trucks and documentation need to be inspected.
  - Bulk trucks should be free of external material buildup such as mud, slush, and dirt.
  - Bagged ingredients should be evaluated for damaged bags.
  - Ingredient weight of bulk and bagged ingredients should be compared with delivery tickets.
  - All shipping documents and delivery tickets should be reviewed and retained.
- ***Rejection or deficiency*: If rejection of an ingredient is necessary, the supplier should be notified within the same business day and documentation including a report and photos should be gathered to file a deficiency claim.**
- *Documentation*: Feed mills must be registered and in compliance with the Bioterrorism Act for record keeping and traceability.
  - Transporters and non-transporters (feed mills) must maintain records that identify both transporter and non-transporter supplier and recipient.
  - Transporters must maintain records of origin, date received/delivered, quantity, product description, route, and transfer points.

    - Non-transporter (feed mills) must have previous source, date of receipt/outbound shipment, product, quantity, transporter, supplier/lot code number. Records must be kept for 2 years.
- *Unloading*: During unloading the receiving pit should be visually inspected and cleaned as needed prior to receiving of the next bulk ingredient to minimize cross-contamination.
    - **Receiving pit covers should be in place as trucks drive over receiving grate to keep debris from trucks and potential pathogens from entering the facility.**
    - **If there is ingredient spillage during unloading, ingredients that have touched the floor should be disposed.**
    - **Under no circumstance should spilled ingredients be swept into the pit to minimize risk for pathogen cross contamination.**
    - For micro ingredients bulk and bags should be visually inspected and used on a first in, first out rotation.
    - For liquid ingredients, all lines should be properly labeled, and line caps locked to secure against improper unloading. For drug receiving, the documentation should be recorded.

Testing

- Once a sample is taken required testing should be determined.
    - Type of testing is determined by variability of ingredient, frequency of use, and/or degree of problem.
    - Options for testing include visual and physical inspection, use of quick tests (if applicable), or use of a commercial laboratory.
    - Samples should be subdivided by a riffle divider prior to analysis and the sample should be riffle divided until the amount needed for analysis is obtained.
    - Keep records of ingredient testing to evaluate supplier compliance and find historical data trends.