

BEST PRACTICES FOR INTEGRATING FEED FORMULATION, PURCHASING AND PRODUCTION TO ENSURE QUALITY AND COMPLIANCE

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OVERVIEW

Using best practices and leveraging technology solutions available today to reduce errors and ensure that feed is being manufactured to required specifications and the required information is being maintained in accordance to current regulations.

KEEPING FORMULAS IN SYNC

Keeping ingredients, ingredient specifications, pricing, supplier, and customer information, and formulas in sync across all information systems is the key to customer satisfaction, animal performance, safety, quality, and ultimately profitability. Formulations need to be followed exactly. Deviation from requested formulations will alter nutrient content of the final feed and may compromise animal performance, margins, and safety.

I. Reduce errors by making sure the right information is kept in sync between purchasing, sales, and manufacturing

- a. Frequency of updating pricing and ingredient specifications
- b. Making sure the correct information is substantiated closer to point of use
- c. If it makes sense, monitor during use – including on farm ingredients like silage

II. Rebates on soybean is a strategy for increasing margin in a cost plus world, but consider value strategies with the producer that focus on animal performance

III. Reduce errors by making sure the correct feed is being manufactured.

- a. Electronically transfer formulas from Formulation to accounting
- b. Ensure the correct formula is ordered for the customer. For example, at the point of order, validate formula and any deviations – whether requested by the producer OR submitted via purchasing in the case of price, or nutritionist in the case of variation to ingredient specification
- c. Tie the order to the production formula at the point of taking the order

- d. Electronically transfer complete manufacturing instructions (including the formula) to automation systems
- e. Record completed manufacturing results; run validation against results for the formula and by ingredient
- f. Generate the correct feed label, at the point when the label is needed to ensure correct label
- g. Integrated purchasing system, ties incoming shipments of products from vendors to outgoing delivery and usages for customers

GAINING VISIBILITY TO MANUFACTURING RESULTS

Identifying manufacturing variances early and taking corrective action is key to ensuring animal performance.

- I. Monitoring out of tolerance ingredient variances closer to production provides a better opportunity to take corrective action before animal performance is affected.
- II. Validating what was produced against what the nutritionist requested. Having a process and the information to validate what was produced compared to what was requested allows you to validate if suggested formula requirements were carried through to production.
- III. Quality control in feed manufacturing includes nearly every function; purchasing must see to it that ingredients of appropriate quality are made available to the mill; nutrition must supply the formulas to meet sales and feeding requirements within the physical capability of the mill to produce; the laboratory must analyze and advise; and the production department must put it all together.
- IV. Consider benchmarking as a way to monitor yourself, first against objectives which you establish for yourself, and then against others. There are several groups that will help in this regard – Cargill Livestock Solutions and Kansas State University are two examples.

RECORD REQUIRED COMPLIANCE INFORMATION

Another key component to an integrated feed solution is the ability to record and report on required information for all receipts of inventory and shipments of finished formulas. Linking this information to the manufacturing order and formula is an important functionality.

- I. Ability to quickly record the required information at the point when inventory is received
- II. Linking receipts of inventory back to the formula and the manufacturing process
- III. Ensure drug and inventory reconciliation

IV. Report on usage of receipts if needed

FLOW OF INFORMATION THROUGHOUT THE FEED COMPANY

How information flows through feed manufacturing when using information systems is key. Many of these steps are not linear in nature – but give an idea of how information may flow to achieve higher levels of profitability, customer satisfaction and compliance.

- I. Ingredients cost from purchasing to formulation
- II. Ingredients cost from formulation to sales and/or nutrition tool
- III. Salesman/Consultants uses ration tools to create feeding plans for a customer
- IV. Feeding plans are fed back to formulation for validation and pricing
- V. Formula's get optimized based on specifications which include availability, usage, price, manufacturing restrictions, and changes to nutrient content
- VI. Approved production formula's are available for ordering
- VII. Customer orders feed, production formula gets revalidated and stored with the order, initial pricing can be recorded or displayed
- VIII. Actual feed orders and forecasted production generates inventory requirements
- IX. Purchasing contracts or spot purchases for inventory requirements
- X. Ingredients are received and analyzed, analysis is used to validate correct production formulas
- XI. Just prior to manufacturing, production formula is revalidated based on current price and analysis
- XII. Daily production run is established and feed is manufactured
- XIII. Actual ingredients used v feed orders is stored for future comparison and pricing
- XIV. Feed labels are generated at bagging or load out
- XV. Delivery documents are generated attaching the appropriate label and customer or warehouse instructions
- XVI. Feed is delivered and invoiced with the appropriate pricing

- XVII. Reporting and business intelligence software can run reports on usage, order versus actual, cost per ton, margin and benchmarking data as appropriate

TAKE-HOME MESSAGE

Analyze your business processes to truly understand how you are keeping formulas in sync, gaining visibility to manufacturing results, and monitoring the flow of information through the feed company. Integrated solutions are attainable and can drive profitability, customer satisfaction, and compliance.

LITERATURE CITED

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