



IAOM/KSU

RESIDENT TRAINING MODULES

MODULE 1

INTRODUCTION TO FLOUR MILLING

- Overview of the US Milling Industry
- Wheat Production, Supply and Demand
- Fundamentals of Grain Logistics
- Overview of the general milling process and major milling components
- Principles of mill flow sheets
- Milling math (Extraction, Tempering and Blending)

MODULE 2

MANAGING MILL PERFORMANCE

The Economics of Milling

- Least Cost Blends
- Extraction
- Shrinkage
- Moisture gain and loss
- Using additives to improve flour performance

Capital investments and ROI

Production reports and plant communications

Energy and Utility Management

MODULE 3

QUALITY CONTROL/QUALITY ASSURANCE

- General Knowledge of the evaluation of physical and functional properties of wheat and flour
- The relationship of wheat varieties and the wheat breeding to quality
- Understanding of wheat and flour specifications for millers and bakers
- Sampling and product traceability
- Flour treatments, receiving and quality control

MODULE 4

MILL SAFETY AND SANITATION

- General knowledge of good manufacturing practices
- Principles of a HACCP program
- Preparing for a sanitation audit
- Understanding of employee safety and food safety practices
- Establishment of pest control and fumigation programs

MODULE 5**MILL PROCESSES I: WHEAT INTAKE AND THE CLEANING HOUSE**

- How to manage wheat purchasing and inventory
- Expectation of a wheat contract
- Understanding of wheat grading
- Requirements of wheat receiving, binning and blending
- Principles of wheat cleaning and tempering
- Understanding on the importance of wheat quality and preparation to the milling process

MODULE 6**MILL PROCESSES II: GRINDING AND SEPARATION**

- In depth understanding of mill flow sheets and design
- Mill balance and product distribution
- Adjustment and maintenance of roll stands
- Sifting and Sifter Maintenance
- The Purification System

MODULE 7**MATERIALS HANDLING**

- Wheat, Flour and Feed handling
- Bulk Storage
- Flour Blending
- Packing and Warehousing
- Air Handling
- Mechanical Conveying

MODULE 8**MAINTENANCE: POWER TRANSMISSION AND AUTOMATION**

- Preventative Maintenance Practices
- Tracking maintenance costs

2009 SCHEDULE OF COURSES

Module 1: January 26-30, 2009

Module 2: February 2-6, 2009

Module 3: March 23-27, 2009

Module 4: March 30 - April 3, 2009

Module 5: June 8-12, 2009

Module 6: June 15-19, 2009

Module 7: October 12-16, 2009

Module 8: October 19-23, 2009