

**Smarter Futures, WHO/EMRO, FFI QA/QC Workshop On Flour Fortification  
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**Fortification at the Mill**  
**- Basic & Best/Enhanced Practices**  
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**Food Fortification Initiative**  
Enhancing Grains for Healthier Lives

# Rationale

- To ensure the consistent application of the fortification practice at the flour mill.
- To ensure that the commercial practices will result in the correct addition of micronutrients to the national diet of the country
- To assure that the fortification will result in the anticipated impact on public health

# Basic practices and Best/Enhanced Practices

- Basic practices are those that meet the minimum requirements for consistent fortification at the mill
- Best/enhanced practices are those that meet more rigorous quality systems – will require additional investment by industry to comply
- CAVEAT – Countries need to strike a balance between making best/enhanced practices and the ability of industry to pay for them

# Components of the system

- Quality systems – GMPs, SOPs, ISO, HACCP
- Premix procurement and handling
- Feeders
- Fortification Process & Quality Control
- Quality Assurance and Audits

# Example – Quality Systems

- GMPs – Good Manufacturing Practices with manuals
- ISO Series – 9001, 9002
- HACCP – ISO22000, SQF

**The minimum requirement for a flour mill is a set of documented GMPs.**

# Basic – Best/enhanced Practices Comparison – Quality Systems

Fortification Component	Basic Practice	Indicator	Best/Enhanced Practices	Indicator
Quality system	GMPs	GMP Manual & Records	ISO 9001, 9002 HACCP SQS ISO 22000	Manuals Records Documents Third Party Audits

# Basic – Best/enhanced Practices Comparison – Premix

Fortification Component	Basic Practice	Indicator	Best/Enhanced Practices	Indicator
Specifications, Ordering, Packaging, Storage & Handling, Preblends	On file GMPs	GMP Manual, Documents, Inspections, & Inspection Records	Quality Systems and Manuals, SOPs	Manuals Records Documents Inspection documents

# Basic – Best/enhanced Practices Comparison – Feeders

Fortification Component	Basic Practice	Indicator	Best/Enhanced Practices	Indicator
Specifications, Types of Feeder Calibrations, Maintenance	On file GMPs SOPs	GMP Manual, Documents, Inspections, & Maintenance Records	Quality Systems and Manuals, SOPs	Manuals Records Documents Inspection documents



# Basic – Best/enhanced Practices Comparison – Fortification Process

Fortification Component	Basic Practice	Indicator	Best/Enhanced Practices	Indicator
Feeder Location, Addition point, Feeder Control, Continuous monitoring, Production monitoring, Feed rates, Check weighing	On file GMPs, SOPs, Calculations	GMP Manual, Documents, Inspections, & Maintenance Records	Quality Systems and Manuals, SOPs	Manuals, Records, Documents, Inspection documents & records

# Basic – Best/enhanced Practices Comparison – Mill QC

Fortification Component	Basic Practice	Indicator	Best/Enhanced Practices	Indicator
Sampling Schedule, Qualitative testing, Quantitative testing, Usage & Inventory control	On file GMPs SOPs, Calculations	GMP Manual, Documents, Inspections, & Maintenance Records	Quality Systems and Manuals, SOPs	Manuals Records Documents Inspection documents & records

# For More Information

For best practices on:

- Procuring premix
- Setting up the mill
- Operating fortification systems
- Assuring quality control

Download the desired section of the Flour Millers Toolkit:

<http://www.ffinetwork.org/implement/toolkit.html>

For more on *premix best practices*, see:

[http://www.ffinetwork.org/implement/documents/Premix\\_Best\\_Practice270408.pdf](http://www.ffinetwork.org/implement/documents/Premix_Best_Practice270408.pdf) in English and

[http://www.ffinetwork.org/implement/documents/Premix\\_Best\\_Practices\\_French.pdf](http://www.ffinetwork.org/implement/documents/Premix_Best_Practices_French.pdf) in French