

Flour Fortification Initiative

18th Annual IAOM Mideast & Africa District Conference & Expo

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Al Ghurair Foods

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A Public-Private-Civic Investment in Each Nation

FFI Building Momentum in the Middle East & Africa



Barr Al Jissah Resort and Spa
Muscat, Oman
December 8-14, 2008

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The Copenhagen Consensus ranks the provision of micronutrients as a top cost-effective investment. . . *above trade liberalization, malaria, water/sanitation*. . . and the benefit: cost ratios for investing indirect nutrition interventions are very high.

Rating	Challenge	Opportunity
Very Good	1. Diseases	Control of HIV/AIDS
	2. Malnutrition and hunger	Providing micronutrients
	3. Subsidies and Trade	Trade liberalization
	4. Diseases	Control of malaria
Good	5. Malnutrition and hunger	New agricultural technologies
	6. Sanitation and Water	Small-scale water technologies
	7. Sanitation and Water	Community-managed systems
	8. Sanitation and Water	Research on water in agriculture
	9. Government	Lowering cost of new business
Fair	10. Migration	Lowering barriers to migration
	11. Malnutrition and hunger	Improving infant/child malnutrition
	12. Diseases	Scaling up basic health services
	13. Malnutrition and hunger	Reducing the prevalence of low birth weight
Poor	14-17 Climate/Migration	Various

Source: Bhagwati et al. (2004)

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Consequences of Iron Deficiency

In Children:

- Anemia
- Poor growth
- Weak immune system
- Reduced cognition and development
 - Poor attention span, concentration, memory, learning ability
 - Poor muscle function and manual dexterity, behavior, social interaction

In Adults:

- Anemia
- LBW and premature babies
- Maternal deaths
- Fatigue
- Reduced work performance



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Consequences of Folate Deficiency

- **Neural tube defects**

- **Spina bifida:**

- **Paralysis**
- **Loss of bowel & bladder control**
- **Learning disabilities**
- **Anencephaly:**
- **Still births or death after delivery**

- **Anemia**



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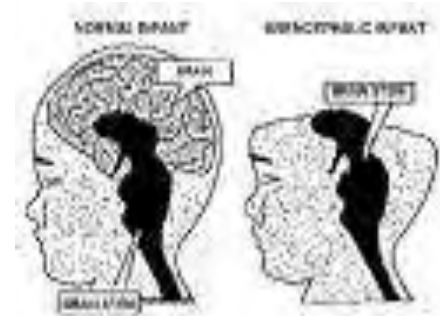
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Spina bifida



Anencephaly



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IAOM Resolution in Support of FFI



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A resolution in support of the Flour Fortification Initiative

Therefore, be it resolved and let it be known that on this the 16th day of May in the year two thousand and three, the International Association of Operative Millers' Board of Directors does hereby,

- ✓ endorse the precepts of the Flour Fortification Initiative and its minimum goal of iron and folic acid fortification of flour world-wide;**
- ✓ encourage individual and collective member and associate member activities that allow for the discovery of the technical, political, and economic barriers that may prevent millers in other countries from fortifying flour;**

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- ✓ advance the cause of the Flour Fortification Initiative through education, training, consultation, guidelines, technical handbooks, web sites, journal articles, video media and any other such communication tools as allowed by the members' respective companies;
- ✓ promptly submit this resolution to its members with recommendation of support,
- ✓ submit the approved resolution to the Flour Fortification Initiative as a testimony of support.

Approved
May 16, 2003
Secretary

Flour Fortification Initiative

FFI Defined – London Forum June 2005

Executive Management Team

Scott Montgomery, Cargill



Alan Court, UNICEF



Peter Böhni, Bühler Group

William Dietz, US Center Disease Control and Prevention

Melinda Farris, International Association of Operative Millers

Jamie Greenheck, Fleishman-Hillard

Greg Harvey, Interflour Group

Venkatesh Mannar, The Micronutrient Initiative

Nicolas Tsikhlakis, Modern Flour Mills

Marc Van Ameringen, GAIN



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FFI REVIEW

In 2004:

- Fortification around 18%
- FFI was still conceptual
- Organizations operating mostly independently



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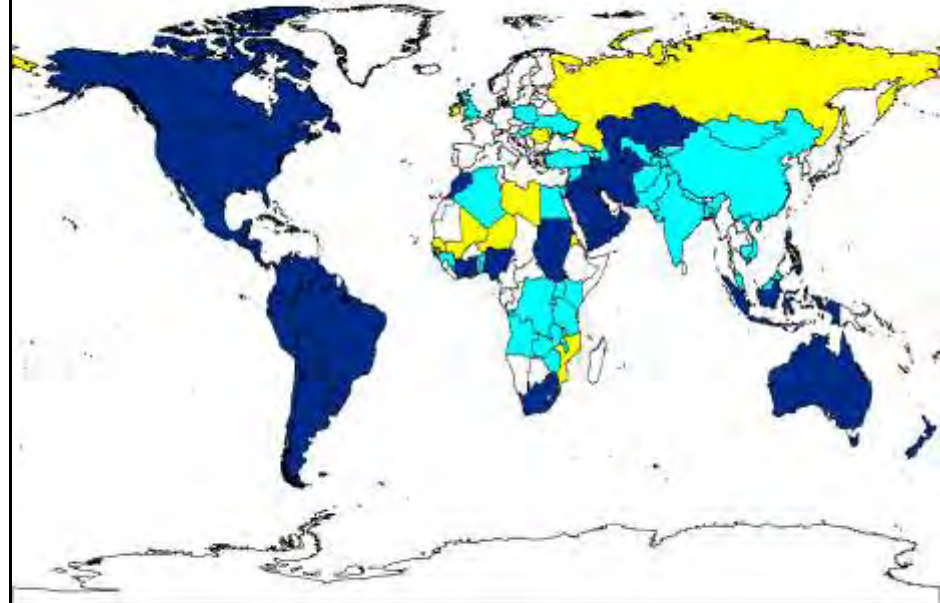
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55 Countries with mandatory flour fortification

<u>Middle East/North Africa</u>	<u>Latin America</u>	<u>Caribbean</u>
Bahrain	Argentina	Barbados
Iran	Belize	Cuba
Iraq	Bolivia	Dominican Republic
Jordan	Brazil	Grenada
Kuwait	Chile	Guadalupe
Morocco	Colombia	Guyana
Oman	Costa Rica	Haiti
Palestine, Occupied Territory	Ecuador	Jamaica
Qatar	El Salvador	Puerto Rico
Saudi Arabia	Guatemala	St. Vincent
Yemen	Honduras	Trinidad Tobago
<u>Sub-Saharan Africa</u>	Mexico	<u>Central and Eastern Europe</u>
Cote d'Ivoire	Nicaragua	Turkmenistan
Ghana	Panama	<u>East and South East Asia</u>
Nigeria	Paraguay	Indonesia
South Africa	Peru	Philippines
Sudan	Surinam	<u>South Asia</u>
	Uruguay	(none)
	Venezuela	<u>Oceania</u>
	<u>North America</u>	Australia
	Canada	Fiji
	USA	New Zealand
		<u>European Union</u>
		(none)

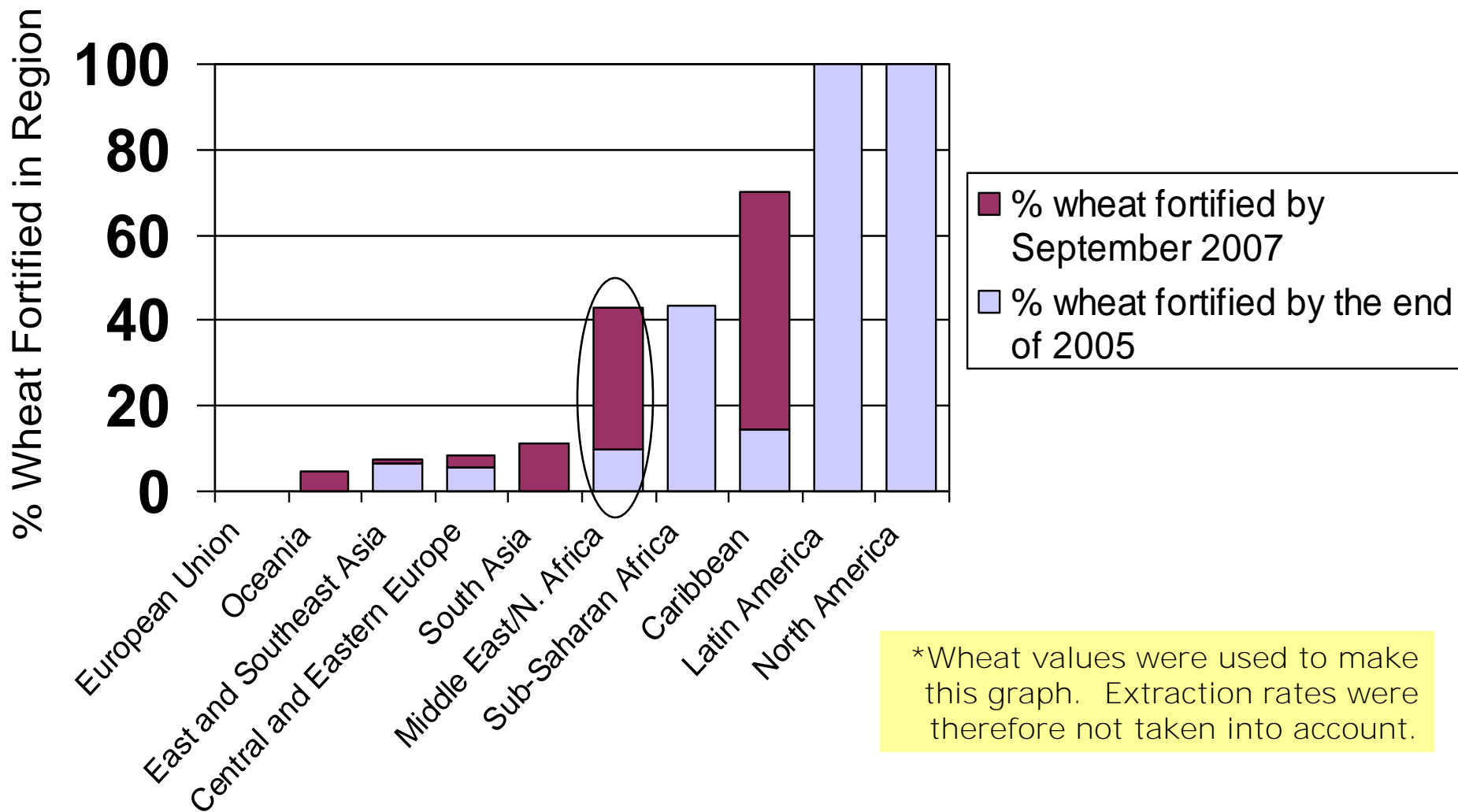
FLOUR FORTIFICATION SITUATION 2007



Fortification Status: Level of legislation

	Nothing or Unknown
	Planning
	Voluntary
	Mandatory

Percent of Wheat Fortified in each Region for 2005 and 2007*



*Wheat values were used to make this graph. Extraction rates were therefore not taken into account.

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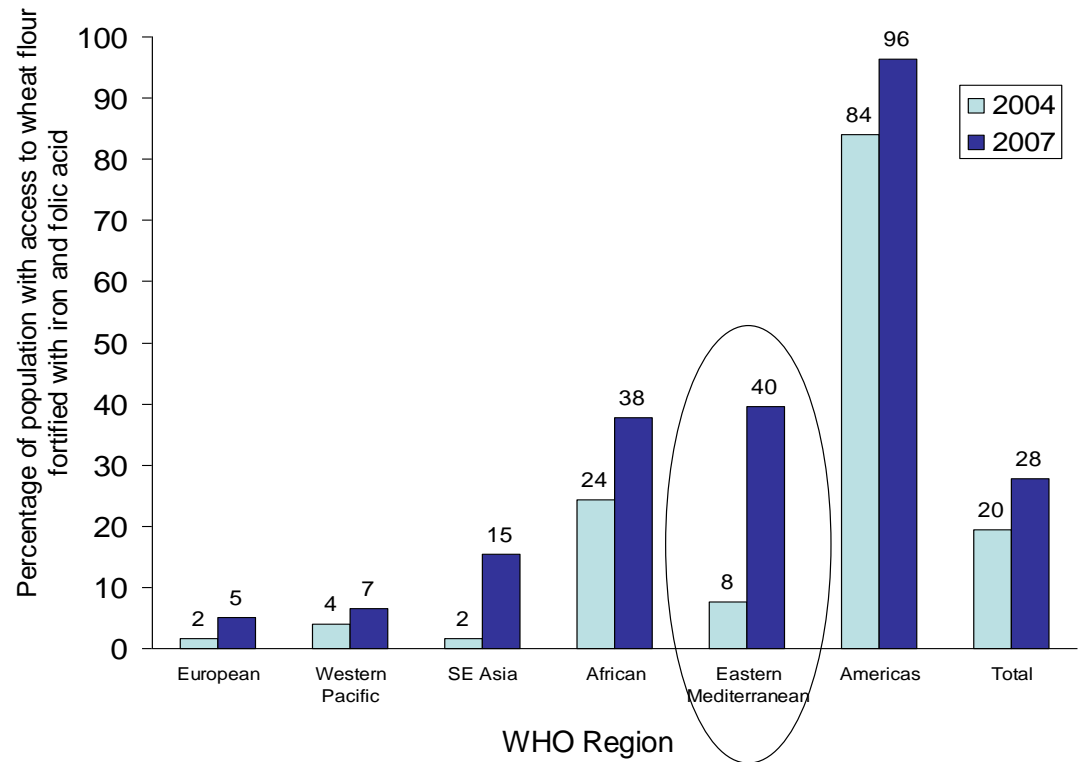
Percent of Population with access to fortified from 2004 and 2007*



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Figure: Percentage of population estimated to have access to fortified wheat flour: Total and by WHO Region – 2004 and 2007



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Countries with National Flour Fortification Programs



Early Adopters

**Bahrain, Iran, Jordan,
Kuwait, Oman, Qatar,
Saudi Arabia, Dubai,
and South Africa**



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Additions since the IAOM Marrakesh Meeting (2005)



**Morocco, Democratic
Republic of Congo, Iraq
Palestinian National
Authority, and Yemen**



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Countries in process to making significant progress toward national scale fortification



**Egypt, Sudan,
Turkey and Uganda**



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MARKET CHALLENGES

- Increased prices of wheat adding pressure on millers
- Increased prices of vitamins and minerals (especially folic acid)
- Most effective fortificants cost more, e.g. iron particles are cheap but may not work

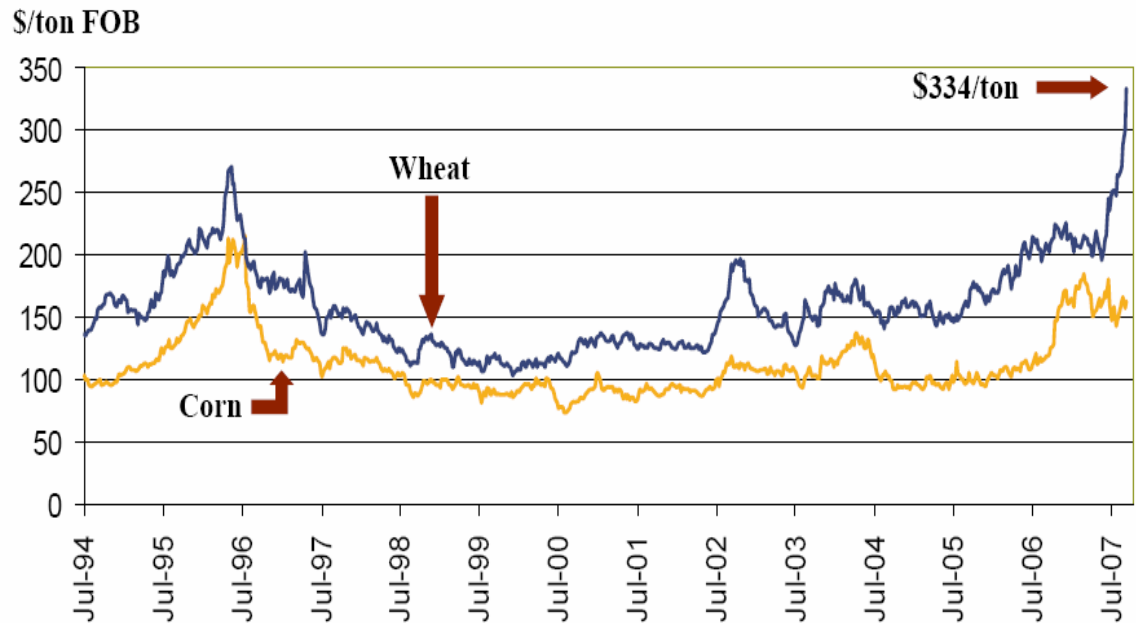


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Rising Wheat Prices

U.S. Prices Soar for All Grains



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REAFFIRMING THE PRINCIPLES

Guidelines to National Action

**Adopted by FFI
Eurasia Regional
Leaders Group,
2006**



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1. Flour Fortification adoption should have national leaders driving the process.

Flour fortification is most successful when it is driven nationally by multiple stakeholders under the guidance of a recognized local leader supported by a core team.

Different sectors (industry, scientific and academic communities, government, civil society) should resolve any internal issues and collaborate to leverage resources a focus on an agreed strategy.

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REAFFIRMING THE PRINCIPLES

2. International involvement catalyses and supports national action

The success of flour fortification in other countries can instill confidence, capability and stimulation when international experts collaborate to provide nationally applicable experience and precise detail regarding fortification standards, legislation and technical advice.



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REAFFIRMING THE PRINCIPLES

3. Fortification should be mandatory; a share-building market approach does not work

Miller profit margins are low and all stakeholders are concerned about price. Attempts to increase profit margins through premium pricing of fortified products have failed.

A level playing field is essential. Countries are recognizing that a “mandatory” approach is the only effective way forward.



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REAFFIRMING THE PRINCIPLES

4. Fortification requires a “system change”

Modifications in the way public institutions operate and private companies do business.

Different sectors should agree upon the need and work together to achieve fortification; this cooperation is often a new experience and requires time, patience, energy and knowledge to build the necessary national capacity.



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REAFFIRMING THE PRINCIPLES

5. Getting the final political “go” is a major step

The national leaders and members of the FFI Leaders Group can help mobilize political will. Reaching the top decision makers is necessary to get the final political “go.”



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CONCLUSION

- Success depends on the FFI Leaders Group to provide leadership & coordination that will maximize the unique nature of our network
- We need to help our partners to more fully engage & work with country leaders as they advocate adoption of mandatory fortification



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