Agenda

- Spice Evolution
- India Becoming Global Hub for Value Added Spices
- Different form of Value Addition –
  - Quality
  - Safety
  - Sourcing
  - Health
  - Packaging
  - Supply Chain
- Value Addition in Spices across the world
Spices were the most valuable items of trade in ancient & medieval times, they were rare & precious products, used for medicine & perfume, incense & flavoring and played a big role throughout human history.

3500 BC
The ancient Egyptians were using various spices for flavoring food, in cosmetics & for embalming their dead

2000 BC
For thousand years, Arab middlemen controlled the spice trade.

500 BC
The Old Testament includes much about herbs

1000 BC
Medical systems based upon herbs could be found in China, Korea & India

200 BC to 800 BC
The Romans controlled the trade

700 to 1500
The Republic of Venice had the monopoly on spice trade with the Middle East

12th to 16th century
Europeans explore passages to East India

1500 to 1600
Wars for the control of the spice trade breakout

1600 to 1900
Americans enter the spice trade

2000 AD
International trade: Over US$1.5 billion per year

In 1492
Christopher Columbus went westwards from Europe to find a sea route to the launch of spices but found America

Source – The Origin of Spices, November 29, 2011
Spice was valued more precious than gold, was used as a currency and was regarded as unattainable luxury.

Spices have been the inspiration for trade, exploration, war, and poetry since the beginning of civilization.

That ground pepper you shake on your salad was once worth its weight in gold.

The nutmeg you grate onto holiday eggnog once fuelled a war that gained Long Island for England.

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Source: Spicing Things up – La Bolte -, April 25th 2013
India becoming global hub of processed, value-added spices

Countries which previously imported whole spices have shifted to ground and blended spices from India.

Focus on research and technology to manufacture innovative products.

Production largely based on a marginal farming business model, adding small farm landholdings will remain important.

Emphasis on quality rather than price for sourcing.

Consumers pay attention to Aroma, Health, Flavor, Packaging & Innovation rather than price.

Source - Rabobank's report 'Decoding the Spices'
McCormick uses its Passion for Flavor™ and Power of People™ to Inspire Healthy Choices and Deliver High Performance, but most importantly, to provide the Taste You Trust™
McCormick pursuing Passion for Flavor for the last 125 years

- Founded in 1889 by Willoughby McCormick.
- Headquartered in Maryland.
- Sell products in over 125 countries and territories.
- $4.1 billion in sales.
- More than 10,000 employees.
- Manufacture products in 24 countries, supplying customers from 50 locations.
- Brands with established reputation for consistent, high-quality, safe, and wholesome food products.

Source: McCormick & Co., Inc. 2013 Annual Report
We are in existence for 125 years because we believe

"Make the Best Someone Will Buy It!"
Willoughby McCormick (1889)

"Our global sourcing program gives us a competitive strength in the area of food safety that is recognized throughout the industry."

Alan Wilson
Chairman, President and CEO
McCormick & Company Incorporated
Different Form of Value Addition -

Packaging  Safety  Health  Supply Chain  Sourcing  Quality

Focus on Quality  Healthy Living  Voice of the Supply Chain
1. Quality

McCormick’s Global Commitment to Quality Leadership Reducing Risk to You and Your Customer

- Strict sterilization and sanitation practices, food safety facility design, GMP’s and Environmental Monitoring Program
- Proprietary steam sterilization technology
- Sustained significant capital investment in plant and facilities
Safe & Secure from Field to Shelf

Identification
All materials are systematically identified to allow for timely traceability of any material stored in, used at, or shipped from a McCormick & Company facility.

Tracking
- Growers
- Raw Product
- Batch
- Storage
- End Product
- End Users

Stop Sale Policy
The Recall, Withdrawal & Stop Sale policy enables quick response in case of emergency.

Traceability and Recall Policy
100% of all material can be traced within 24 hours, forward and backward, from any point in the system.

Final Product
- In-Process & Final Pack
- Recall & Traceability

Tamper-resistant seals protect product safety and freshness through delivery to the final customers.

McCormick Brings Passion to Flavor
## Treatment Method Comparison

<table>
<thead>
<tr>
<th>Method</th>
<th>Effectiveness</th>
<th>Benefits</th>
<th>Drawbacks</th>
</tr>
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<tbody>
<tr>
<td>Steam</td>
<td>Pathogen free (i.e. kills salmonella and E. coli), kills yeast and mold and reduces bacterial load</td>
<td>No residue, accepted globally, flavor not impacted by the process</td>
<td>Slight color loss in some herbs</td>
</tr>
<tr>
<td>EtO</td>
<td>Pathogen free, kills yeast and mold and reduces bacterial load</td>
<td>Effective method, terminal process, flavor not impacted by the process</td>
<td>EtO banned in most countries, ECH residue, worker exposure danger</td>
</tr>
<tr>
<td>Irradiation</td>
<td>Pathogen free, kills yeast and mold and reduces bacterial load</td>
<td>Effective method, approved in the US, terminal process, flavor not impacted by the process</td>
<td>Needs to carry the food irradiation symbol, negative consumer perception.</td>
</tr>
<tr>
<td>Sample &amp; Release</td>
<td>FDA approved sampling protocol</td>
<td>100% natural, product is not changed in any way, flavor not impacted by the process</td>
<td>No active effort to treat, adequacy of this method depends upon how uniformly the protocol is applied</td>
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</table>
- Rigid Quality Standards
- Commitment to Continuous Improvement
- Proprietary Technology
2. Safety

Key Quality and Food Safety - Risk Management Practices

- Material Risk Assessment
- Supplier Quality Expectation Manual
- Global Economic Adulteration Monitoring Program
- Prevention Based Microbiological Program
McCormick’s Global Commitment to Food Safety

As the largest spice manufacturer in the world with $4.1B in sales and 50 locations in 24 countries, we require the highest standards in food safety and quality.
3. Sourcing
Spice and Herb Sources

McCormick’s successful sourcing of products from around the world has enabled us to achieve the optimum quality from year to year given localized variations due to weather and economic / political instabilities.

Successfully sourcing from multiple locations facilitates securing the quantity and quality of material at the optimum price.
Global Sourcing Sustainability – ‘Spice’

- Strong ties to suppliers
- Promote best practices throughout entire supply chain
- Increased incomes to spice producers by supplying better value raw materials
- Corporate commitment to support community social needs
- Environmental stewardship and protection
10 Questions to Ask Your Spice Supplier

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
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<tbody>
<tr>
<td>1</td>
<td>Where do you get your spices?</td>
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<tr>
<td>2</td>
<td>What programs assure Good Agricultural Practices and Good Manufacturing Practices in the growing regions?</td>
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<tr>
<td>3</td>
<td>How are new origins evaluated?</td>
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<tr>
<td>4</td>
<td>What programs are in place to assure ground spices are not adulterated?</td>
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<tr>
<td>5</td>
<td>How are the spices sterilized?</td>
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<tr>
<td>6</td>
<td>Is the efficacy of the sterilizer validated?</td>
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<tr>
<td>7</td>
<td>What post processing controls are in place to prevent microbial cross contamination of raw, untreated and sterilized spices?</td>
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<tr>
<td>8</td>
<td>What third party food safety and quality certifications or audits does the spice manufacturer have?</td>
</tr>
<tr>
<td>9</td>
<td>What product and environmental sampling and microbiological testing programs are in place?</td>
</tr>
<tr>
<td>10</td>
<td>What programs are in place to verify the accuracy and reliability of microbiological, chemical and physical tests?</td>
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4. Health
Health Benefits of Spices

Spices as an Antidote to Spoilage

Spice Mixture enhance the Food Preservation
5. Packaging

- Natural Deteriorative Characteristics of Spice & Spice Products
  - Loss of Aroma & Flavor
  - Bleaching of Color
  - Loss of Free Flowing Nature
  - Microbial Spoilage
  - Insect Infestation

Hence to take care of above problems packaging plays an important role to maintain the quality & safety of spices.
Packaging Material Requirement for Spices & Spice products

Should have protection against spoilage & spillage

Should have protection against physiochemical & microbiological spoilage due to environmental conditions like humidity, temperature, and light.

Should be a good aroma barrier to prevent loss of flavor substance from the product & pick up of foreign odors.
6. Supply Chain
Control Principles

- The most effective and efficient method to assure the absence of economic adulterants and contaminants is through control of the supply chain back to source.

- We deploy a positive control based, Quality Assurance approach to prevent adulteration of our agricultural raw material base.

- Our strategic control of the supply chain is based on a three-pronged approach:
  - Vendor alliances
  - Source material control
  - Control of manufacturing process

- These form the cornerstone of the management of the supply chain from field to plant and assure adulterant-free material.
Importance of Value Addition in Spices

Importance

India’s estimated production of spices is 5.9 million tonnes in 2012-13, and about 11.5% is exported, amounting to 0.7 million tonnes. By 2016-17, the estimated production of spices is expected to reach 6.6 million tonnes. The export target for 2016-17 is set at 0.8 million tonnes. The government has set a target of increasing the export of spices to 1 million tonnes by 2022. The value addition in spices is crucial for increasing the export potential. The government is giving priority to value addition to enhance the profitability and competitiveness of the spices industry. This will help in increasing the income of farmers and creating employment opportunities in the sector.
Global Spice Market

Steady Growth

The packaged spice and herb market globally is a $10.5 billion retail category. The category is expected to grow by another $1 billion by the year 2017.

U.S.A

The United States represents the largest market for packaged spices & seasonings worldwide, capturing a significant share of the global market. 40 spices is the average number of different spices that consumers have in their kitchens – a figure that has grown over the past few years. A substantial portion of diners (36%) say that they are more interested in trying new flavors than they were before.

Source: MarketLine Industry Profile Feb 2011; Technomic, Jan 2012; Datamonitor, April 2012; Euromonitor International
Spice Value Addition - USA

Data Analytics
Technical Innovation Centre
Packaging
Merchandising
Manufacturing/
McCormick Science Institute
Processing
Spice Value Addition - China

Product Specs  Merchandising  Manufacturing/Processing
Spice Value Addition - India

Pouches & Boxes Manufacturing/Processing
Indian Market a change from pyramid to sparkling diamond

India...

- Growing at an average annual rate of 7.6% for the past five years.
- A young population, 54% of Indians under 25 years of age.
- A fifth of Urban Indian Shoppers now shop regularly at Modern Trade. (as per Neilson’s report)
India – Let’s Spice it Up!