

# MARS

Tomorrow starts today

**NFSA Symposium 2024**

MARS BEST PRACTICES IN PEANUTS

# What we will cover today

- Know your presenter
- Know MARS
- The MARS Peanut Journey

# AHMED LOKMAN

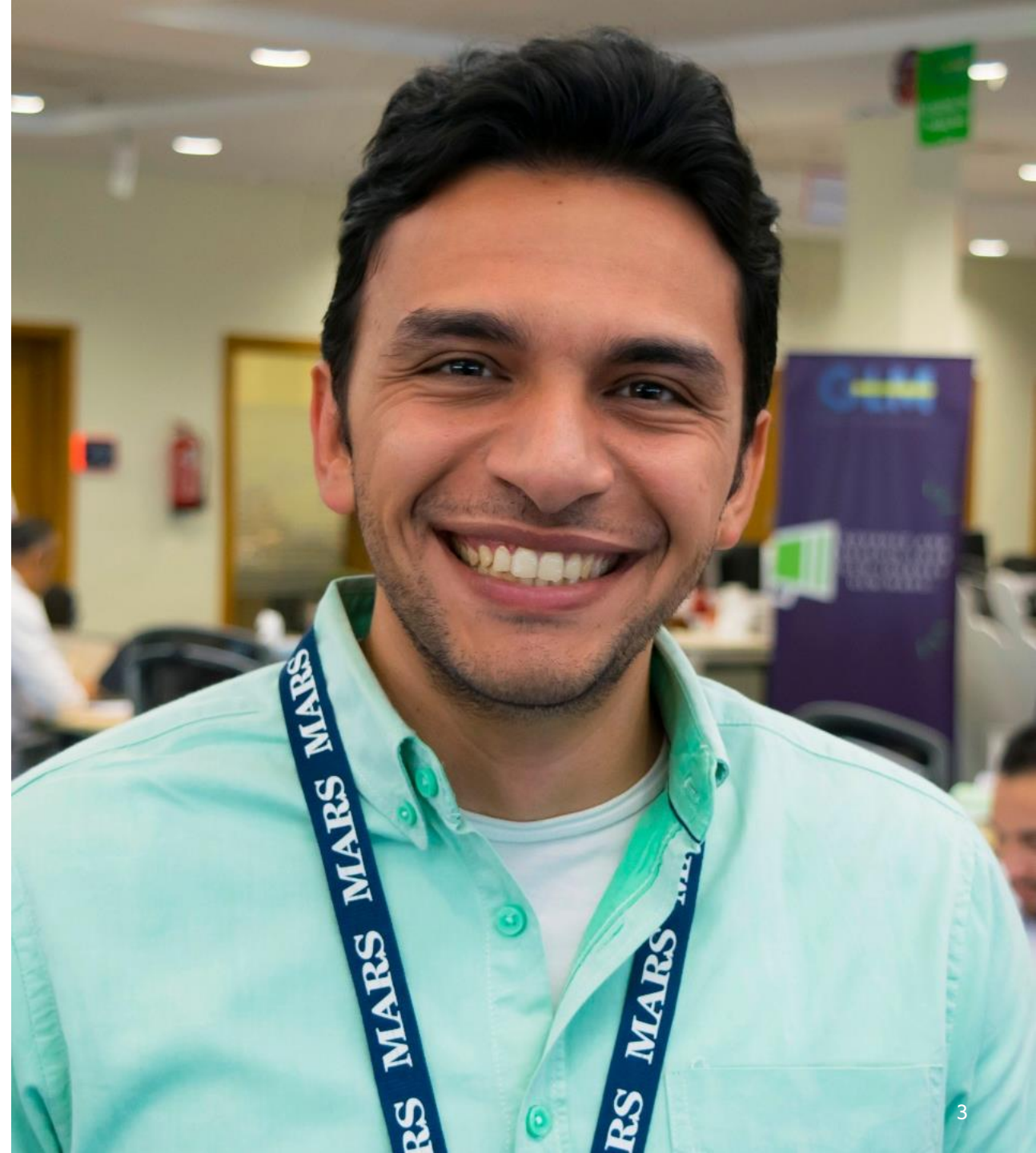
MEA Commercial Director at MARS

- Pharmacist by education
- Food Safety Expert
- Expertise in Quality Assurance
- Passionate about stakeholder engagement
- +13 years of multinational experience



**MARS**

**MARS**



# ABOUT MARS: OUR BUSINESS

**+100 years in business.  
Family-owned.  
Future-facing.  
Purpose-driven.**

# MARS

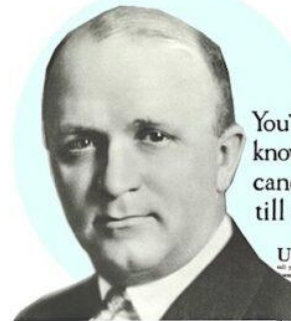
## MARS INC. OVERVIEW



Franklin Clarence Mars

- Mars Incorporated was created in 1911 in Tacoma, Washington by Franklin Clarence Mars
- He started off by selling hand dipped candy at the age of 19
- His company started off selling only confectionery items but has now grown into other branches, including pet care, food, and drinks.
- Throughout this entire time, the company was known for their secrecy.

Frank Mars



1882-1934

You'll never know *how good* candy can be—till you've tasted **Milky Way**

UNTIL you actually experience the thrill for your self you can't imagine what it's like. You can see that it seems like this or like that, because it isn't until you've tasted it that you know. It's the same way in food and what you've been missing is Milky Way. Take a good, hearty bite through that thick, milk chocolate coating, through that layer of creamy caramel and through that golden wafer. When you taste the blending of these three flavors, that you'll be able to talk with authority about candy.

It's more good because it really is good, in every sense of the word. It's a rich combination, rich in white milk, milk!

MARS, INCORPORATED

milk, heavy milk chocolate and fresh eggs. Every single ingredient is the very best that money can buy. Each ingredient of ingredients is carefully tested for quality, and then used in the wonderful factories of Milky Way. Plus the fact that it's rich in the finest purest top fresh supplies in the way country.

Milky Way is so good, so full of quality, so delicious and carefully made, that it has created completely new standards of candy excellence. It is so really different that it is the ideal treat for children as well as adults.

But one today... now... and know how good candy really can be.

CHICAGO, ILLINOIS



**Mars ARE MARVELLOUS**

THERE'S A MEAL IN A Mars

Marvelous that anything so fine can be so full of real goodness too. But, as you see, Mars bars are packed with all those good things that nourish, energize and sustain you.



milk chocolate coating  
caramel layer of sugar, malt, glucose and milk  
delicious centre of malt, chocolate, glucose and sugar - all whipped in white of egg.

Forrest Mars Sr.



1904-1999

**ABOUT MARS:  
OUR BELIEFS**



**Five Principles**

**Quality Responsibility Mutuality  
Efficiency Freedom**

**MARS**

**ABOUT MARS:  
OUR PURPOSE**

**MARS**

Tomorrow starts today

# MARS Inc @ A GLANCE

The world we want tomorrow starts with how we do business today

**MARS**



**140,000+ Associates**

are united and guided by Five Principles of Mars, which span geographies, languages, cultures and generations



**1911**

Frank C. Mars made the first Mars candies in his Tacoma, Wash., kitchen



70+  
Markets worldwide



HQ  
Global HQ in McLean, VA

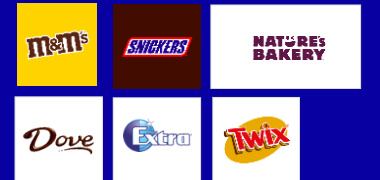


**170+**

Mars brands are enjoyed in 170+ markets worldwide



**Billion Dollar Brands**



glassdoor  
**BEST PLACES TO WORK**



Private, family-owned company



**\$47B+**  
NET SALES

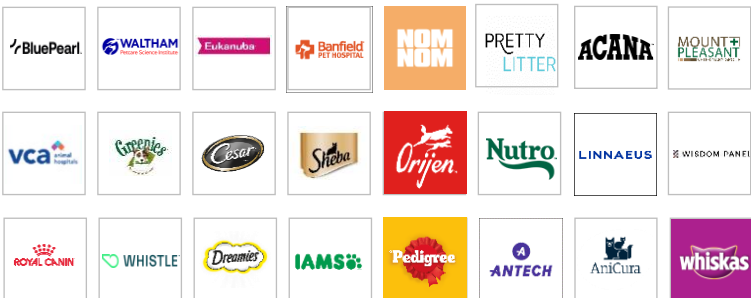


**400+**  
SITES

**3,000**  
VETERINARY HOSPITALS

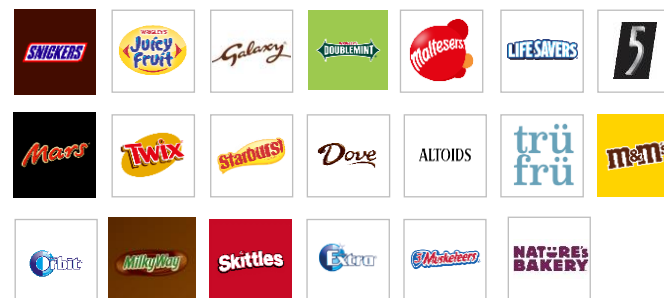
**MARS**  
Petcare

A Better World For Pets



**MARS**  
Snacking

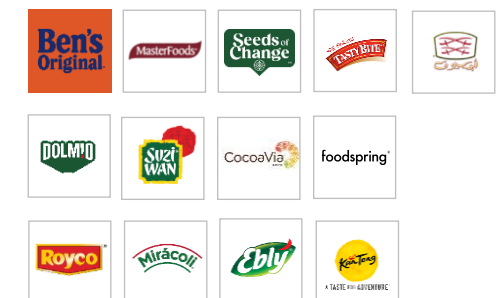
Inspire moments of everyday happiness



**MARS**

Food & Nutrition

A Better World For Food



**Present in Egypt for +20 years**



# Producing high quality, local favorites

## Galaxy

- ✓ 18g
- ✓ 36-40g
- ✓ 56g
- ✓ 90g
- ✓ Minis



Dark Truffle



Hazelnut



Milk



Caramel



Crispy



Fruit & Nut



Salted Caramel

## Flutes



Flutes Choco



Flutes Cream



Twix Wafer rolls



Single



White



Multipack

4 Finger



## Milky Way Crispy Rolls



24 SB



5 MP



6 MP



Caskets



Pouches



Reg



Nut



Cream

Tins



Regular



Nut



Single



Minis



Twin



Xtra



Multipack



Choco-Hazelnut



Caramel crunch



Triple chocolate



Salted Caramel



# Exporting to +40 countries & counting.....

## Current

- ✓ 16 MEA Markets
- ✓ 13 European Markets
- ✓ 13 Other Markets



## Upcoming

- 6 CEAB Markets
- Korea
- Taiwan

# **Peanut** Overview & Journey from MARS...



**MARS**

# AGENDA

## WHAT

- PEANUT
- AFLATOXIN



## WHY

- RISK
- GLOBAL



## HOW

- PRE-HARVEST
- POST HARVEST



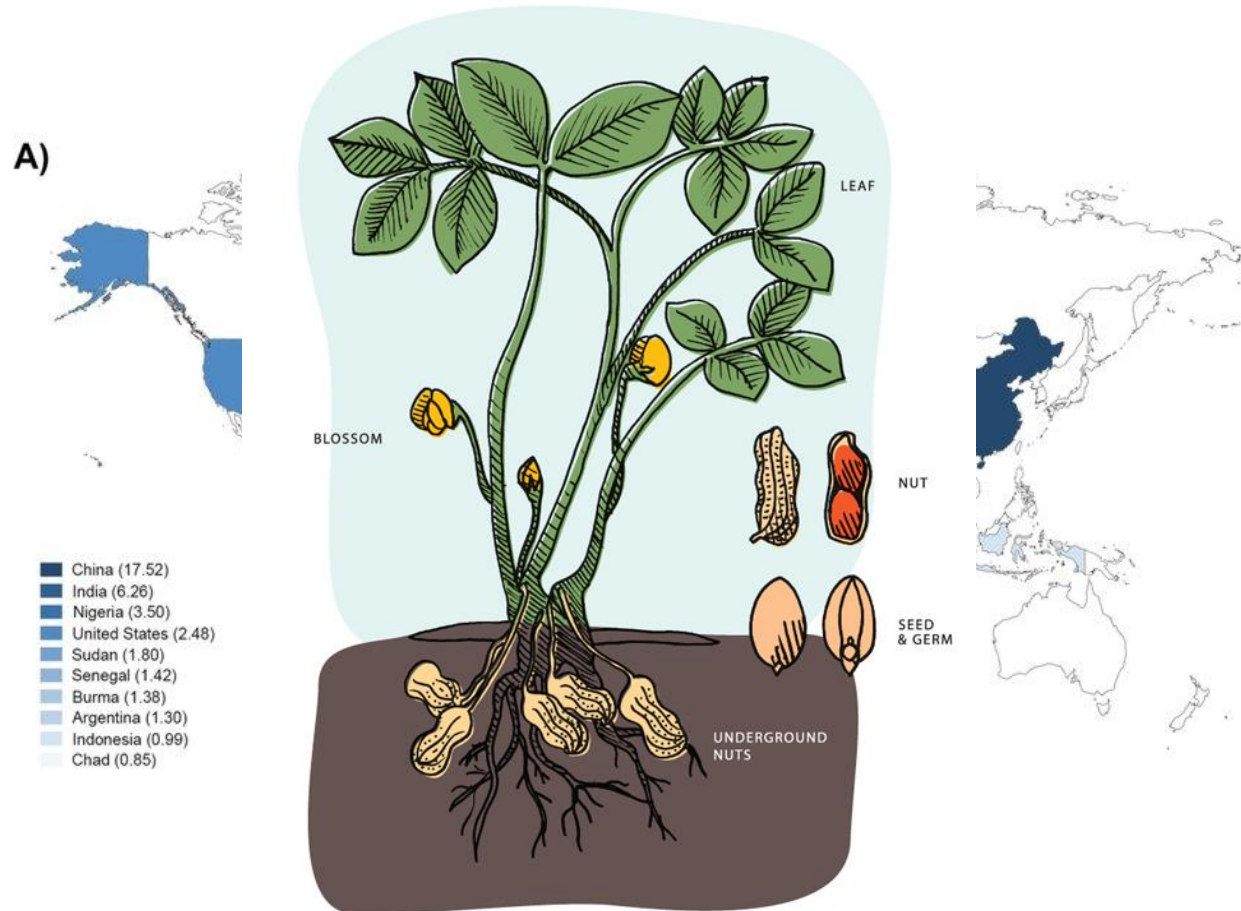
## WHO

- FARMERS
- STAKEHOLDER  
ENGAGEMENT



# WHAT

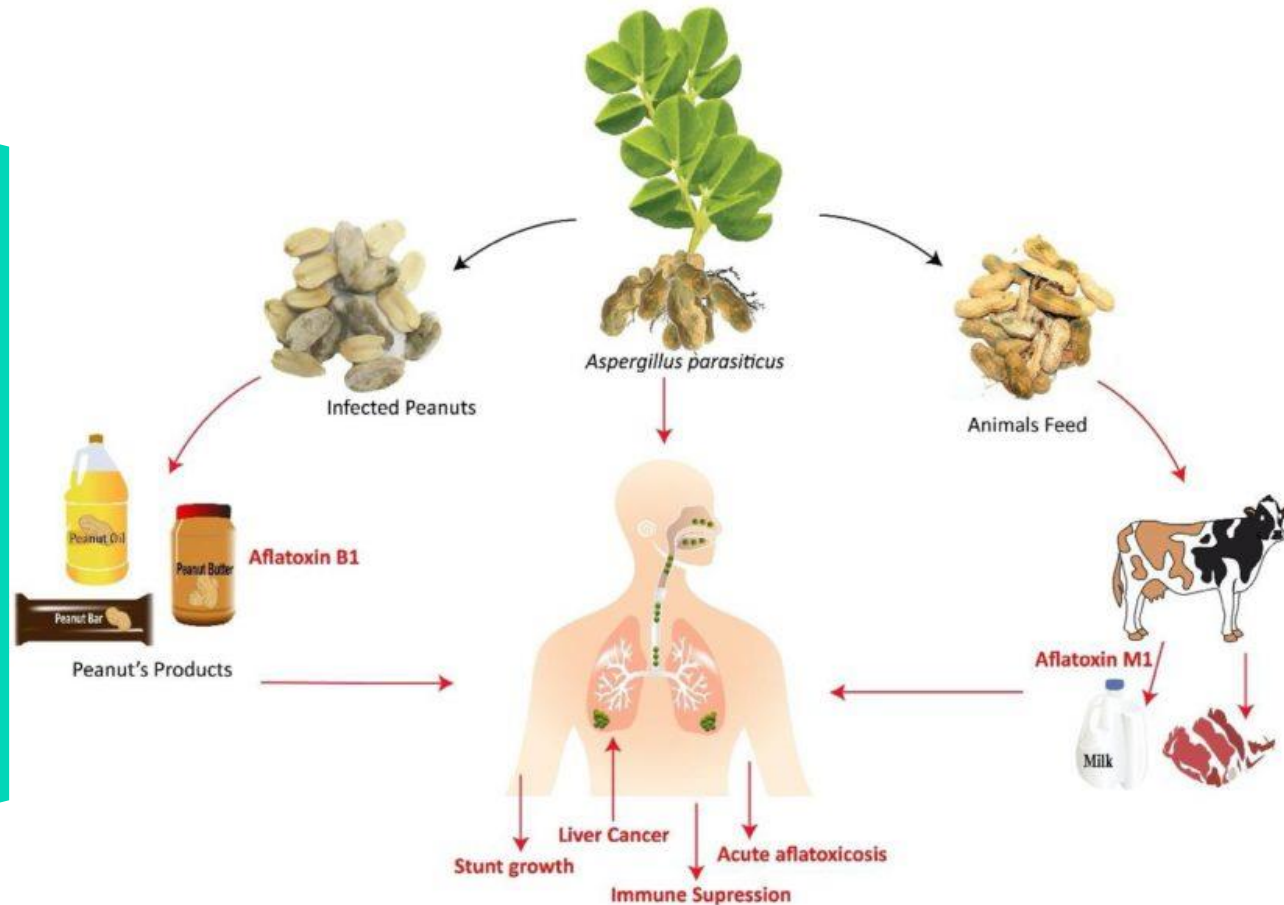
- PEANUTS
- AFLATOXIN



- Peanut is one of the most economically important oilseed and feed crops globally.
- Yield and quality of peanuts are reduced by the invasion of *Aspergillus flavus* and *A. parasiticus* during production, harvest, storage, and processing.
- **These fungal pathogens are soil-borne and infect peanut seeds and plants after direct contact with them.**
- The pathogens can both reduce yield and contaminate the crop with aflatoxins.
- Widespread aflatoxin contamination often occurs in hot and humid agro-ecological zones.

# WHY

- RISK
- GLOBAL



- Aflatoxins are poisonous chemicals.
- **These lethal toxins pose a threat to the food and feed industry.**
- Aflatoxins are the most potent carcinogens (cancer-causing substances)
- Chronic exposure to aflatoxins by eating contaminated food over time may result in liver cancer in humans and animals.
- Aflatoxins are classified into different groups depending on the fluorescence they emit upon exposure to ultraviolet (UV) light.
- Aflatoxins that emit blue fluorescence in UV light are labeled B1 and B2, green fluorescence – G1, and green-blue fluorescence – G2.
- **Among the aflatoxin groups, aflatoxin B1 is the most potent carcinogen.**

# HOW

- **PRE-HARVEST**
- **POST HARVEST**



## Pre-harvest

- Use of **resistant** varieties
- Timely irrigation
- Commercial **Bio-Control** Products and RNA interference spray
- Insect management
- Calcium
- **Early harvesting**
- **Crop rotation**
- Weed management

## Post-harvest

- **Storage** conditions
- Equipment sanitization
- Packaging
- **Separation** of infected and healthy pods
- **Worker protection** from exposure to spore dust

## HOW

- PRE-HARVEST
- POST HARVEST



## SAMPLING

- Mycotoxins are strongly **unevenly distributed** in a commodity
- Samples to be taken from as many as possible increments from as many as possible different points.

## TESTING

- To use appropriate and recognized methods
- HPLC is trusted

# WHO

- FARMERS
- STAKEHOLDER ENGAGEMENT



**MARS**



**FARMERS**

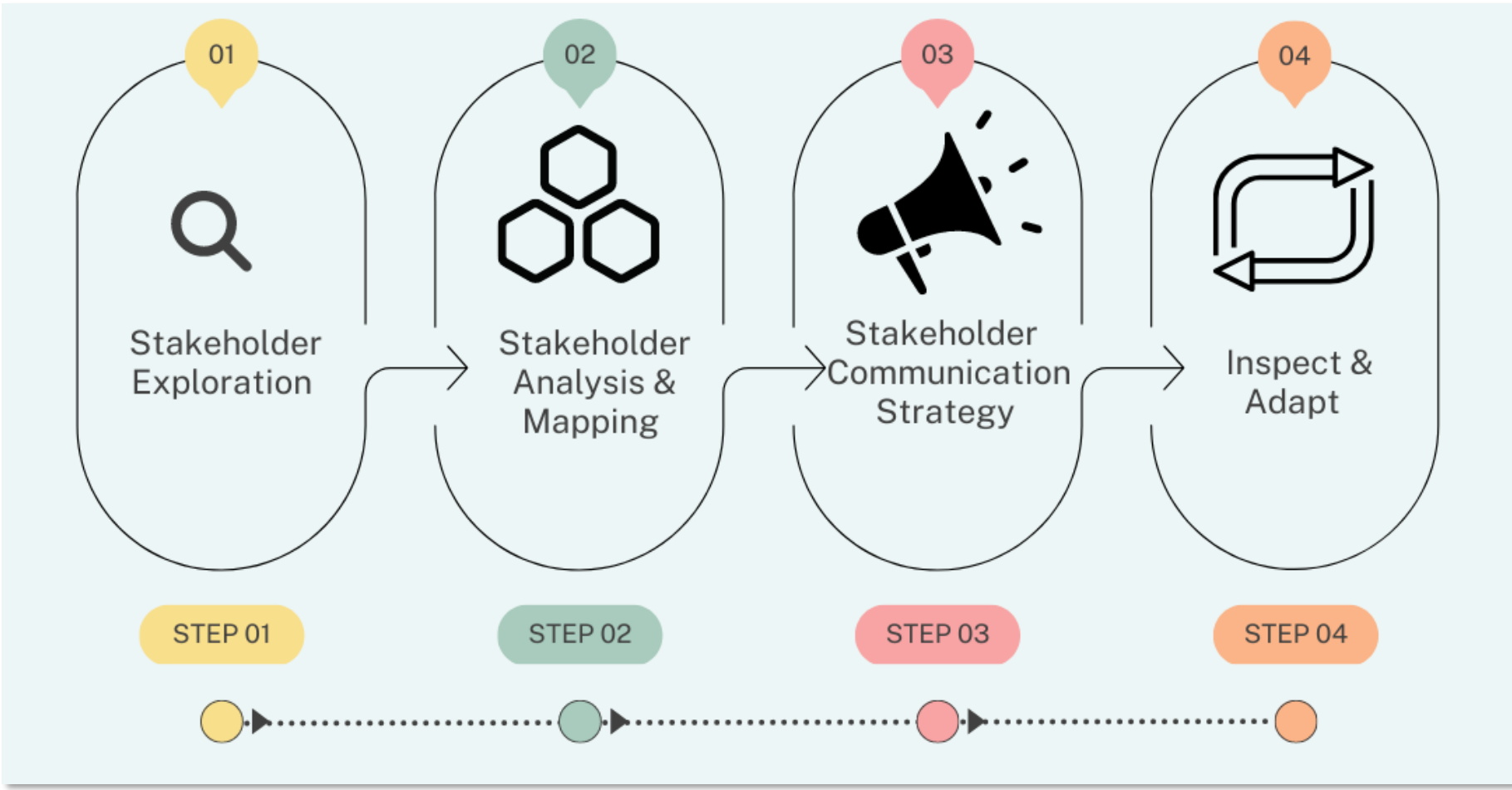
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# How to build the right engagement and collaboration outside? Circle of Influence vs Circle of Control...

**WHO**

- **FARMERS**
- **STAKEHOLDER ENGAGEMENT**



# HOW MARS CONTRIBUTED TO SAVE FARMER'S HARVEST?

- **India is among the top five peanuts producers!**
- **A significant loss of yields have been occurred due to lack of GAP.**
- **As part of our MARS Principles, we signed agreements with NGOs to support small farmers with the needed knowledge and GAP to overcome these issues.**
- **Our program trained more than 900 peanut farmers.**

**MARS**

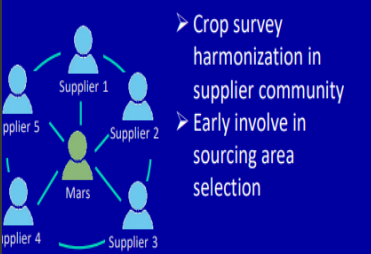
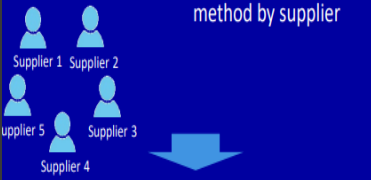


**When MARS saved a Farmer's harvest!**

# Integrated E2E Peanut Supply Chain Quality Management Methodology established through the collaboration between multiple functions internally and externally to mitigate Aflatoxin risk

# A Story from China!

## Mǎi 买 Source From Safe Origin



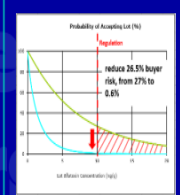
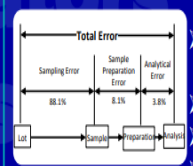
- Aflatoxin risk vary from climate and origin
- Different crop survey method by supplier
- Crop survey harmonization in supplier community
- Early involve in sourcing area selection

## Tiāo 挑 Enhance Upstream & Supplier Capability



- Poor upstream practice
- Insufficient understanding on supplier sorting capability
- Different defect and damage standard used in different suppliers
- Upstream management via Tier 1 supplier
- Led research to identify peanut appearance types with high Aflatoxin level;
- Supplier sorting capability study to improve aflatoxin contained kernels removal.
- Defect and damage USDA standard deployment

## Duì 对 Optimize Sampling and Testing Model



- Cannot cover distributional heterogeneity – high buyer risk
- Manual sampling
- Inadequate comminution
- GB Aflatoxin method only
- Develop and deploy scientific sampling method to realize 95% confidence complying with regulations.
- Auto sampler
- Comminution to paste - increase homogeneity
- Japan Aflatoxin method development



**WHAT**

- PEANUT AFLATOXIN

**WHY**

- RISK GLOBAL

**HOW**

- PRE-HARVEST
- POST HARVEST

**WHO**

- FARMERS
- STAKEHOLDER ENGAGEMENT

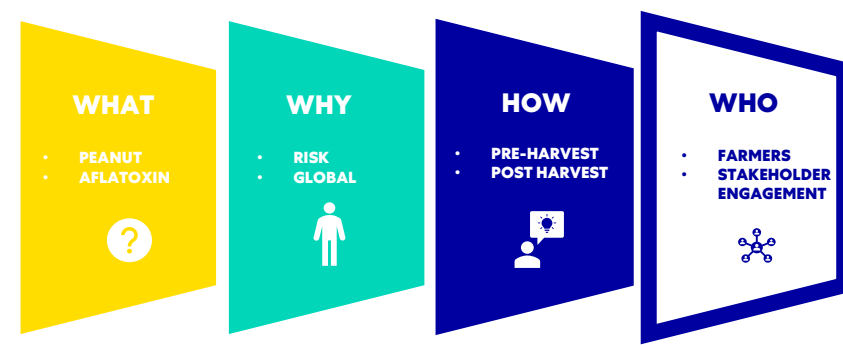
# Through our work, we strive to realize the UN SDGs




## SUSTAINABLE DEVELOPMENT GOALS



# In a *'nut'* shell....



1. **Quality is Mars' First Principle.**
2. **Aflatoxin prevention and control has 2 steps: Pre- and Post-harvest.**
3. **The starting point is the FARMER.**
4. **Collaboration with the full peanut supply chain is KEY.**
5. **Partnering with organizations unlocks a lot of potential.**

A man with grey hair and sunglasses, wearing a blue and white checkered short-sleeved shirt, is kneeling in a field. He is looking down at a large pile of harvested peanuts that he is holding with both hands. The background is a vast, open field of brown earth under a clear blue sky. The overall scene conveys a sense of agricultural expertise and hands-on work.

**Peanut is beyond farming or testing; it is more of a holistic approach...**

**MARS**

**Q&A**

THANK YOU