

**THIS VERSION OF THE NMB ISSUES AND CRISIS GUIDE IS STRICTLY CONFIDENTIAL. DO NOT FORWARD OR SHARE THIS DOCUMENT WITH ANYBODY OUTSIDE OF THE NMB BOARD OF DIRECTORS.**

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**IF YOU ARE FACING A CRISIS OR POSSIBLE CRISIS,  
GO DIRECTLY TO PAGE 5**

## **INTRODUCTION**

An issue or crisis involving mangos has the potential to affect a significant number of National Mango Board (NMB) members directly and to undermine the industry as a whole. This became a very real fact for the industry during the 2012 voluntary recall of mangos in North America and subsequent government reports and media coverage regarding the food safety concerns. However, a rapid, coordinated response can help ensure that the NMB and its members are able to respond to an issue or crisis with accurate information and in such a way that helps safeguard the health and safety of consumers, and while helping the NMB achieve its goals of increasing the consumption of mangos in the United States.

The 2024 Issues and Crisis Response Guide is intended to assist the NMB and its members in responding to potential crisis situations by providing a set of key guidelines, reminders, and considerations that are important in managing an issue effectively.

These guidelines for responding to an issue, recall, or other event are especially important for an industry as complex and diverse as the mango industry. With several countries represented, the NMB can best serve the mango industry by providing clear, concise information representing the mango industry in a manner that does not escalate the issue or crisis.

Additionally, it is important to note that in the event of a crisis, the NMB's role is to represent the industry as a whole, which includes representing the entire industry in public outreach and helping coordinate an effective response in partnership with the members of the mango industry, especially those directly affected by the issue.

While the NMB cannot speak or act on behalf of individual NMB industry members, the NMB can and will represent the entire industry with key audiences such as consumers, trade and national media, retail and foodservice customers and others; distribute accurate, timely information to its members and key audiences; and assist industry members as appropriate. The NMB also will facilitate dialogue between its members and the appropriate government agency contacts and others within the industry to help ensure as swift a resolution as possible.

## **DEFINITION OF A CRISIS**

In general, a crisis will be defined by its interference with the mango industry's daily operations, its impact on the industry's profitability and/or its effect on the product's image. It is assumed that anything that has such a basic impact on the industry will either soon be visible to the media or whose impact has been amplified due to media coverage of the issue. As such, a crisis also is defined as a problem affecting the mango industry that has received or is likely to receive media attention and could negatively alter the consumer's perception and consideration of the fruit.

## **PRIORITIES DURING A CRISIS**

The *first priority* in any emergency is the safety and protection of U.S. mango consumers. However, issues that affect consumers outside of the United States should be monitored for their potential to affect the U.S. market or to result in media coverage in the United States.

The *second priority* is to provide a disclosure of completely accurate information about a crisis situation and the mango industry's part in it. This might include:

- Situation and facts as can be determined by the NMB and/or its members.
- NMB and/or its members' responsibility in communications regarding the situation.
- NMB and/or its members' action plan to assist in the resolution and prevent further occurrences.

The *third priority* is compliance with all relevant Federal, State and local laws and regulations.

The *fourth priority* is providing accurate information about the mango industry and help the industry continue to do business in the United States.

The *fifth priority* is protecting the wholesome image of mangos.

The *sixth priority* is to learn from a crisis experience and incorporate the lessons into this plan.

It has been shown in virtually every recent example of companies and industries involved in a crisis, including the 2012 recall of mangos, that taking the appropriate action to protect consumers quickly is the most consistent factor contributing to a long-term, successful resolution of a crisis.

## CRISIS RESPONSE TEAM

An important step in preparing for a crisis is to have a core crisis team in place. Depending on the specific issue, others may be added, according to need. During a crisis, the team should have frequent contact and each member should be prepared to forego his or her normal routine and outside interests.

Some key roles among the Crisis Response Team include:

- **NMB Executive Director**, who will serve as the lead in coordinating NMB and industry-wide response. The NMB Executive Director also will be available to counsel industry members on their company's particular situation and how best to respond from an industry perspective.
- **NMB Director of Marketing & Communications**, who will lead efforts to develop key messages in response to a crisis in partnership with the NMB Executive Director as well as other communication materials to be customized for outreach to industry, retail and foodservice customers, and others.
- **NMB Director of Research & Industry Relations**, who will provide counsel regarding food safety issues in coordination with NMB member companies and third-party experts.
- **NMB Director of Operations**, who will provide administrative support to NMB staff, including coordinating meetings, conference calls, and translations.
- **NMB USDA Contacts**, who will review and approve all written materials distributed by the NMB to ensure that they are in alignment with U.S. Department of Agriculture (USDA) requirements for agriculture promotion groups such as NMB.
- **PR Counsel**, who will advise NMB staff and, as appropriate, Crisis Response Team members on how best to respond to a crisis, as well as provide support in drafting communications materials for media, website, social media channels, etc.
- **Legal Counsel**, who will ensure NMB's actions and communications comply with all applicable regulations and requirements.

- **NMB Board Members**, who will provide counsel to NMB staff regarding a crisis' impact on the mango industry and help distribute and amplify the NMB's information and position regarding an issue or crisis.

**Note:** Please see page 73 for a full contact list, including names, phone numbers and emails, of all NMB Crisis Response Team members and other key contacts.

## **CRISIS CONFERENCE LINE AND GROUP EMAIL**

In the event of an issue or crisis, the Crisis Response Team will convene via a Zoom meeting for all pertinent update calls.

Staff will create a group email (e.g., NMB [ResponseTeam@mango.org](mailto:ResponseTeam@mango.org)) that includes the designated Crisis Response Team members. This email will include a confidentiality statement and be used to communicate with the group during an issue or crisis.

**INITIAL INCIDENT CHECKLIST: Determine the nature and severity**

**What kind?**

- ☐ Natural disaster, significant crop loss/damage due to natural disaster
- ☐ Criminal activity
- ☐ Illness or sickness speculated to be caused by mangos
- ☐ Consumer or union picketing
- ☐ Environmental
  - Describe type: \_\_\_\_\_
- ☐ Aberrant employee(s)
- ☐ Other \_\_\_\_\_

**Response of person first aware of the problem:**

- ☐ Contact appropriate authorities (e.g., police, fire, etc.)
- ☐ Contact NMB Executive Director
- ☐ Other \_\_\_\_\_

**Response of mango industry member:**

- ☐ Make sure all steps are taken to ensure the safety of employees and customers.
- ☐ Ask the following questions to decide if notification of next level should be made:
  - Is there serious, life-threatening injury or illness involved, or is it likely to occur?
  - Is there significant property damage?
  - Is there negative media interest, or is there likely to be negative media interest?
  -

***If “NO”***

- ☐ Handle the problem
- ☐ Notify NMB Executive Director of the measures to be taken

***If “YES”***

- ☐ Proceed with appropriate emergency measures
- ☐ Notify NMB Executive Director of the situation and request assistance

**Response of public relations counsel and NMB leadership:**

- ☐ Convene immediately via conference call or meeting
- ☐ Ask the following questions to decide if notification of the crisis team should be made:
  - Are there any hidden threats to public health, consumer safety, the industry, or NMB members, its employees or property?
  - Is there potential damage to the mango image?
  - Does the problem warrant the involvement of the Crisis Response Team?

***f “NO”***

- ☐ Complete the resolution of the problem
- ☐ Report incident to the crisis team through regular “non-emergency” channels

***If “YES”***

- ☐ Begin contacting all members of the Crisis Response Team
- ☐ Put crisis response plan into action

## CRISIS PROCEDURES CHECKLIST

After it has been determined that an incident is serious enough to assemble the Crisis Response Team, follow these procedures to manage crisis situations as effectively as possible, including identifying a crisis, creating a response, and communicating to the NMB's various audiences.

The Crisis Response Team will follow these eight steps during a crisis situation:

### Step 1: Assemble and Mobilize the Crisis Response Team

If a potential crisis presents itself,

- ☐ The team lead or the alternate Team Lead will determine if the NMB staff should be contacted immediately for evaluation and more information gathering.

As soon as word of an emerging or potential crisis situation reaches the NMB staff, they will:

- ☐ Determine the nature and severity of the crisis. (See Initial [Incident Check List](#) on the previous page)
- ☐ Contact each member of the Crisis Response Team at the first indication of a crisis. (See [Crisis Team Contact List](#).)
- ☐ Notify the USDA Technical and Government Liaisons, Andrew Charles [Andrew.Charles@usda.gov](mailto:Andrew.Charles@usda.gov) // (951) 401-1843 and Matthew Collins, [matthewb.collins@usda.gov](mailto:matthewb.collins@usda.gov) // (972) 210-9109
- ☐ Assign one or more team members to contact other key parties and companies involved in the situation or who could be affected.
  - ☐ Provide key parties and companies contacted with pertinent initial information about the situation. NMB may also provide recommendations but will not prescribe or dictate solutions to individual companies.

### Step 2: Gather More Information and Assess the Situation

- ☐ The Team will gather more information to gain an accurate overview of the events that have taken place to date, assess the situation, and separate facts from rumors and speculation.
- ☐ The NMB Executive Director will assign one or more of the team members or their designee(s) to obtain the information on the crisis briefing worksheet (See [Crisis Briefing Worksheet](#) and reach out to government officials, affiliated organizations, etc. to compile information (See [Crisis Fact Gathering Guidelines](#)). They must relay this information to the Crisis Response Team as their highest priority.
- ☐ The team should fully assess what caused the event and the potential impact of the situation, including:
  - ☐ Worst-case scenario and worst-possible outcome?
  - ☐ What would be the best solution?
  - ☐ What action or component of the crisis event does the NMB have the best opportunity to influence?
  - ☐ What action or component of the crisis event must be managed by industry members directly or indirectly affected by the event?

### Step 3: Activate the Team

If the situation is at crisis level,

- The Team Lead or alternate will assemble the Crisis Response Team or hold a conference call.
- The Team Lead (NMB Executive Director) or alternate will facilitate the team's activities, including:
  - Review the facts of the crisis at hand. (See [Crisis Briefing Worksheet](#).)
  - Develop an action plan, including:
    - Identify needed/missing information, assign person(s) to gather
    - Develop initial communications to members
    - Develop/shape key messages for media and other stakeholders
    - Identify NMB spokesperson(s) and provide media refresher training
    - Identify on-site crisis manager, if appropriate
    - Work with affected industry members to align company and NMB messaging as appropriate
    - Line up third-party spokespeople (See Contacts and on each Issues page)
    - Establish media monitoring
    - Review/assign responsibilities
    - Schedule next meeting and meet frequently

In activating the Crisis Response Team, it is important to ensure that the team and NMB staff are prepared to handle inquiries and help ensure that accurate information is being provided to key contacts. Following are the recommended steps:

- When a call is received, the NMB staff member answering should ask the name and organization of the person calling.
- If the call is a member of the media, a message should be taken regarding the following:
  - Name of the media outlet
  - Subject
  - Deadline
  - Call-back number
- All messages from the media should be given to the NMB Executive Director, who will respond to the call or delegate it as appropriate.
  - Delegation may include determining that inquiry should be answered by the company affected as the NMB is not able to speak or act on behalf of individual industry members.
- If the NMB Executive Director is not in the office, media messages should be given to the NMB's Director of Marketing & Communications, who will determine who should handle the call.
  - Messages from retail or foodservice customers should be given to NMB Executive Director or Director of Marketing & Communications; they will respond to the call or delegate it as appropriate.
    - Delegation may include determining that inquiry should be answered by the company affected as NMB is not able to speak or act on behalf of individual industry members.

**NMB Members:** The above recommendations assume that the calls are being received by the NMB. However, these recommendations can also be adopted for use by a company that is directly or indirectly affected by a potential crisis. If a member company receives a media inquiry about an industry issue or crisis, it is recommended that they request the reporter's information (see above) and notify the NMB Executive Director to help ensure accurate information is shared with the media and other members.

#### Step 4: Determine a Course of Action

This step is important because it ensures NMB and its industry members appear united by delivering one clear message in a timely manner. Based on a review of the situation, discuss the potential vulnerabilities that exist. It is critical to be prepared for the worst. Consider such factors as media interest to date and potential interest, consumer risk factors, and other potential public issues.

The Crisis Response Team should then take steps to:

- ☐ Remove the source of the crisis: The source and substance of the issue must be dealt with. If there is a pathogen linked to fresh mangos, then it must be traced to determine cause. If there is a threat to employee or community safety, it must be addressed in an appropriate manner. In many cases, individual companies, not NMB, will be responsible for removing the source of the crisis.
- ☐ Contain the problem: In the best scenario, the situation is contained locally, avoiding damage to the mango industry's overall credibility or reputation.
- ☐ Communicate honestly and factually: Keep key audiences informed of the NMB and/or the mango industry's actions. Also, correct factual errors or misinformation immediately. Use the information gathered to develop messages tailored to each audience.

A crisis is best contained by promptly providing accurate information to all of the organization's audiences and the influencers who communicate with those audiences. Once the facts of the crisis have been confirmed, the Crisis Response Team should identify all audiences that could potentially be affected and designate communications responsibilities to individual team members (See [Notification List](#)).

Audiences may include:

- ☐ Industry members (growers, shippers/packers, importers)
- ☐ Collaborators: NMB media RDs and blog/media partners
- ☐ Consumers
- ☐ Customers: Retailers and foodservice distributors
- ☐ Government Agencies & Health officials
- ☐ Vendors
- ☐ News, trade media and social media
- ☐ Third-party organizations / foreign mango organizations
- ☐ ☐
- ☐ NMB marketing staff and PR consultant will identify communication methods to reach these audiences, including:
  - ☐ Media communications such as stand-by statements, news releases, fact sheets, media alerts and press conferences.
  - ☐ Consumer communications such as consumer-specific statements distributed by emails, website updates, social media channels (e.g., Facebook, Twitter, etc.) and question and answer documents.
  - ☐ Member and related industry communication such as statements sent via email.
  - ☐ One-on-one communications with key individuals (e.g., expert consultants, government authorities, etc.).
- ☐ NMB marketing staff and public relations counsel will also evaluate the advantages and disadvantages of taking a proactive stand with media and social media. In the preparation of media inquiries, public relations counsel will develop questions and answers, which will then be reviewed and approved by NMB's Executive Director, the Team Lead or the alternate lead.



- ☐ NMB Executive Director and Director of Marketing & Communications will be responsible for responding to media inquiries on behalf of the mango industry as a whole.
- ☐ In instances where media or others are requesting information specific to members of the industry, NMB will direct inquiries to that company or organization. As appropriate, NMB will work with that company to respond to the inquiry with accurate, timely information.

#### **Step 5: Develop Statement for Release and Secure Approvals**

- ☐ At the outset of the crisis and at various points throughout the acute stage of the crisis, it will be necessary to develop a written statement on the situation, to be provided to the media in writing or verbally.
- ☐ The Crisis Response Team, with input from the public relations counsel, will decide at what points statements are to be issued or if individual interviews with media are more appropriate. Any statement developed will represent the position of the entire mango industry and will provide only accurate, verifiable information.

NOTE: Any written or verbal statements intended for media placement must be approved by USDA. Send to Andrew Charles [Andrew.Charles@usda.gov](mailto:Andrew.Charles@usda.gov) // (951) 401-1843 and Matthew Collins [matthewb.collins@usda.gov](mailto:matthewb.collins@usda.gov) // (972) 210-9109.

Additionally, pertinent materials will be translated from English to Spanish and distributed in a timely manner. Timing of translations will be dependent on the length and complexity of the information.

- ☐ The main points to be included in the statement will be developed by the Crisis Response Team in consultation with the public relations counsel. Initial communication with the media should be limited to the following:
  - What happened?
  - Where and when did it happen (as specific as can be determined)?
  - How and why did it happen (without speculation)?
  - What mango products (if any) were involved? What is the nature of these products and how are they typically used?
  - Factual assessment of the current situation and risk.
- ☐ The public relations counsel will draft the statement with input from the Crisis Response Team. The NMB Executive Director should have final approval before the statement is sent to USDA for review and approval. As necessary, the NMB Executive Director will solicit input from other Crisis Response Team members.

#### **Step 6: Identify and Prepare a Media Spokesperson**

The NMB can best serve the mango industry when it relies on a single spokesperson (and an alternate) to communicate with media during a crisis. This builds relationships with journalists and helps ensure that NMB is communicating a clear, consistent message on behalf of the mango industry.

- ☐ The NMB Executive Director, the Marketing and Communications Director or an appropriate board member will serve as the spokesperson, depending on the situation. Public relations counsel also can help fill this role by “evaluating and prioritizing” media requests.

- ❑ Spokespersons will receive refresher message and media training, if necessary. In circumstances where NMB cannot respond on behalf of a mango industry member regarding the crisis' impact on their business or the company's actions, the NMB and its public relations counsel can provide support to the company to develop an appropriate response within the context of NMB's responsibilities for promoting and providing accurate information about the mango industry.

The person who serves as a spokesperson and the alternate should:

- Be articulate, intelligent, and credible.
- Appropriately represents NMB and the mango industry.
- Be able to speak with authority and credibility on the actions NMB and the mango industry are taking to resolve the crisis.
- Have the appropriate composure and training to handle challenging situations, including aggressive, confrontational media interviews.
- Consider responding to media inquiries as a priority.
- Concentrate on communicating the NMB and the mango industry's key messages related to the crisis and leave specific scientific questions to appropriate experts.
- Be in constant contact with the Crisis Response Team for statement updates and new information.

#### **Step 7: Keep a Pulse on Rumors and Speculation**

During a crisis, rumors and speculation about a crisis become much more active and can be a real source of misinformation.

- ❑ The NMB and the Crisis Response Team should remain informed of rumors and speculation.
- ❑ The NMB, in consultation with the Crisis Response Team, public relations counsel, and the USDA, will determine how best to ensure that publicly reported information is accurate.
- ❑ The goal of publicly communicated information shared with mango industry, the media or others is to ensure that misinformation, speculation, and rumors do not cause unnecessary damage to the mango industry's business and/or reputation.

#### **Step 8: Evaluate and Re-evaluate**

After external attention subsides, it is important to conclude by collecting and recording relevant information and insights gained during the crisis. A thorough post-crisis review not only ensures an event has been put to rest, but also helps prevent a repeat of the crisis.

The following actions should be taken at the conclusion of the crisis:

- ❑ Consulting with senior management and the public relations counsel, determine a post-crisis schedule to coordinate follow-up and analysis.
- ❑ Appoint a post-crisis closedown team, including a spokesperson to handle follow-up media, a team member to manage crisis analysis, and a logistics contact to coordinate follow-up efforts.
- ❑ Restore normal, day-to-day operations and regular communication activities.
- ❑ Implement appropriate techniques for evaluating and measuring the effectiveness of the crisis communications program:
  - Gather all documentation and media coverage information for review, analysis, and after-event reports and recommendations.
  - Develop a list of all people (e.g., journalists, third-party advocates and critics) and organizations (e.g., regulatory, industry) that played a role in the crisis situation.

- Conduct an internal survey within the team and senior management of the overall effectiveness of the communications.
- Consider a baseline consumer research to gauge public opinion and impact of the crisis on sales.
- ☐ Review the regulatory environment if necessary/appropriate.
- ☐ Create summary report with follow-up recommendations.
- ☐ Make report, or a synopsis of the report, available to internal staff and members.
- ☐ Construct a standby summary report for the spokesperson to use with the media and industry to describe the overall outcome of the crisis. If appropriate, release the report to these audiences and make it available online.
- ☐ Make goodwill contact with all parties involved in the crisis (via letter or direct contact).
- ☐ Provide relevant information to the public relations counsel to be integrated into future versions of the Issues and Crisis Response Guide.

## **FACT GATHERING GUIDELINES**

This section provides a series of questions to consider asking to become more informed about the situation and be able to prepare the best plan of action and the potential external and internal response.

### **General information:**

- ☐ How did you learn about the incident (e.g., member, media, public health official)?
- ☐ What happened (e.g., person became sick, testing revealed contamination, etc.)?
- ☐ Where did the incident occur (e.g., restaurant, retail outlet, etc.)?
- ☐ When did it happen?
- ☐ What steps have been taken to contain the situation (e.g., recall, public notice, etc.)?
- ☐ Who has been notified (e.g., USDA, public health officials, media, etc.)?
- ☐ Who is the point of contact at each agency and industry operation?

### **If the incident involves testing at inspection site:**

- ☐ Has any product left the terminal?
- ☐ How much product is involved?
- ☐ Do you know where the affected product is?
- ☐ Have customers been notified?
- ☐ Does the incident warrant consideration of retail and/or foodservice notification?
- ☐ What, if any, actions are being taken by U.S. Food and Drug Administration, USDA or other agency?
- ☐ Who is the spokesperson? Is there a statement?
- ☐ Is the media involved?

### **If the incident involves human illness:**

- ☐ Has anyone died? Has anyone been hospitalized? What is their condition?
- ☐ Who is heading up the investigation into the source of the contamination?
- ☐ Has a common source been identified?
- ☐ Is the media involved?
- ☐ Are any activist groups involved?
- ☐ Has a lawsuit been threatened or filed?

### **CRISIS BRIEFING WORKSHEET**

The Crisis Response Team should use the grid below to help assess the crisis situation. Based in part on the information gathered here, the team will assess what caused the event and the potential impact of the situation. This information will help guide the thinking and steps to take place in crisis identification and response preparation.

<b>DATE:</b>
<b>NATURE OF INCIDENT (Who, what, where, when, why, how):</b>
<b>WORST CASE SCENARIOS:</b>
<b>WORST PROBABLE OUTCOMES:</b>
<b>TRIGGER EVENTS:</b>
<b>BEST PROBABLE OUTCOMES:</b>
<b>ACTIONS TO INFLUENCE:</b>
<b>PEOPLE INVOLVED/TO BE CONSULTED:</b>

## NOTIFICATION LIST

The NMB staff will use this below notification list to help determine which audiences and key contacts need to be informed of a potential, current, or ongoing issue that could affect the mango industry.

Audience	Questions to Consider to Determine Outreach	Do We Need to Contact?		Owner
		YES	NO	
Industry Members	<ul style="list-style-type: none"> <li>Will this situation cause anxiety for industry members?</li> <li>Do some or all members need to be notified?</li> <li>Will this situation receive coverage in the media?</li> <li>Are there current or future programs that could be affected by this situation?</li> <li>Will members be asked about this by others outside of the industry?</li> <li>Will members resent not being told?</li> <li>How much damage are rumors and misinformation creating?</li> </ul>			
Government Agencies and Health Officials	<ul style="list-style-type: none"> <li>Is this a public health or environmental issue?</li> <li>Is a government agency already involved or investigating the matter?</li> <li>Are there concerns regarding local, state, federal, or international regulations or requirements?</li> <li>Is government action required or requested?</li> </ul>			
News, Trade Media, and social media	<ul style="list-style-type: none"> <li>Will the media get information on the situation whether the company gives it to them or not?</li> <li>What information does the media already have and how did they receive it?</li> <li>Are media discussing this on social media channels?</li> <li>Will industry reputation be affected unless information is aggressively released to the media?</li> <li>Will providing information online or through social media improve or worsen the situation?</li> </ul>			

Audience	Questions to Consider to Determine Outreach	Do We Need to Contact?		Owner
		YES	NO	
Consumers	<ul style="list-style-type: none"> <li>What do they need to know about the source of the problem?</li> <li>What actions do they need to take to protect themselves and their families?</li> <li>What steps are members or the industry taking to minimize risk?</li> <li>Who can they contact for more information?</li> <li>Are consumers discussing this on social media channels?</li> <li>Will providing information online or through social media improve or worsen the situation?</li> </ul>			
Customers (buyers)	<ul style="list-style-type: none"> <li>What do they need to know about the source of the problem?</li> <li>What actions do they need to take to protect public health?</li> <li>What steps are members or the industry taking to resolve the situation?</li> <li>Who can they contact for more information?</li> </ul>			
Collaborators <ul style="list-style-type: none"> <li>Investigators</li> <li>Consultants</li> <li>Opinion leaders</li> </ul>	<ul style="list-style-type: none"> <li>Do collaborators need to be notified?</li> <li>Will the incident impact relationships with existing or potential collaborators?</li> <li>Will the situation create uncertainty?</li> <li>How will the collaborators communicate with their key audiences?</li> <li>Will collaborators be contacted via a third party (e.g., media) to comment on the incident?</li> </ul>			
Industry Trade Associations	<ul style="list-style-type: none"> <li>Do we want the organization to take a position on the issue? Or will they have to?</li> <li>What information do we want the organization to share and with whom? Could it be an ambassador?</li> <li>Will the organization help solicit input from the NMB or third-party experts on the issue?</li> </ul>			
International Organizations	<ul style="list-style-type: none"> <li>Will this situation affect them too?</li> <li>If so, how could it affect them?</li> <li>Do they also have a role to play in protecting public health?</li> <li>What, if anything, should they communicate to their members?</li> </ul>			

Audience	Questions to Consider to Determine Outreach	Do We Need to Contact?		Owner
		YES	NO	
Vendors	<ul style="list-style-type: none"> <li>Does the incident involve vendors?</li> <li>Will the incident affect the vendors work on behalf of the NMB and/or the industry?</li> <li>Are there other entities that could have been impacted by the vendor?</li> <li>Is the vendor prepared to communicate?</li> <li>Will the situation create uncertainty in vendors' minds?</li> </ul>			

## **MEDIA RELATIONS AND MESSAGE DEVELOPMENT TIPS**

**Objectives of these tips** - *How an organization handles itself in the midst of a crisis may influence how it's perceived for years to come*

- ☐ Understanding the role of media relations during a crisis
- ☐ Developing and emphasizing key messages
- ☐ Learning techniques for confident and controlled interviews
- ☐ Practicing interview skills and message delivery

### **Role of Media in a Crisis**

- ☐ From a communications perspective, handling the media is the most critical element
- ☐ When crisis strikes, media attention quickly turns to “feeding frenzy”
- ☐ In a crisis, the media are sneaky - their goal is to unearth any salient or salacious element that will advance the story line of the crisis
- ☐ Media is operating at a cross-purpose with the company or organization, which is trying to put the crisis behind it

### **The Pros of Media Relations**

- ☐ Vehicle to reach your target audiences
- ☐ Effective way to reach large numbers of people
- ☐ Shapes public opinion, providing “objective, third-party” endorsements
- ☐ More credible and affordable than advertising
- ☐ If you don't talk...others will

### **Value of Good Media Relations**

- ☐ Maintain solid reputation
- ☐ Establish trust and credibility
- ☐ Reach influencers, including customers
- ☐ Attract and retain employees
- ☐ Offer “your side of the story” in a controversy

### **Who Are the Media?**

- ☐ Lack of trust/skeptical
- ☐ Irreverent of authority and power
- ☐ Trained to get both sides of the story
- ☐ Under pressure to meet tight deadlines
- ☐ Are highly competitive; don't like to be beat
- ☐ Must tell the story with limited copy/airtime
- ☐ Report to editors who scrutinize
- ☐ Tend to change jobs frequently
- ☐ Rarely experts in a particular topic/industry

### **What Media Expect**

- ☐ To be the first to write the story
- ☐ Quick access to top executives and experts
- ☐ Data to prove trends/claims, such as company financials and industry statistics
- ☐ Help finding real-life case studies/people/companies to illustrate story
- ☐ Concise communications

**Role of Spokesperson** - *The Executive Director is the spokesperson of the NMB*



- ☐ The spokesperson is the most credible source of information
- ☐ The spokesperson is the “face” of your company and the mango industry at the time
- ☐ The spokesperson makes your company and the mango industry “human”
- ☐ The spokesperson is key to achieving media relations objectives

### **Developing Key Messages**

- ☐ Decide three to five most important points you want to make, each in 10 seconds or less. The fundamentals of early-stage key messages include:
  - What happened? (We are recalling...)
  - When and where did it happen? (It is limited to a particular PLU.)
  - What are you doing about it? (We are working to...)
  - Are there any threats to public health and safety?
  - Do not speculate
  - Be consistent
  - Be helpful and demonstrate concern for the people and property affected
  - Provide “proof points” where available - may be used more as the crisis unfolds

### **Example of Key Message Development**

Scenario: More than 22 people sick, 2 hospitalized and one death (a 90-year-old man who had health issues) from *listeriosis* – the source has been narrowed to a regional restaurant chain in Michigan and potentially to mango salsa, but not confirmed – this was one of the common foods eaten by the victims. An ABC news crew wants to interview someone from the NMB about unsafe mangos in the restaurant supply chain and what the board is doing about it.

- ☐ Suggested Key Messages
  - The mango industry’s hearts go out to those affected by this food safety issue
  - Providing a safe product to the U.S. consumer is the mango industry’s #1 priority
  - The NMB and its members encourage adherence to all USDA import requirements and is working with officials to get to the bottom of this outbreak

### **Message Delivery - *Know exactly what you want to say and how to say it!***

- ☐ Keep it simple, straightforward and sincere; don’t obscure the information
  - Reduce your main points to one sentence
  - Limit your answers to three sentences
  - Focus on short sound bites
- ☐ Prepare for the toughest questions

### **Stick to the Message - *You’re not there to answer questions, you’re there to make your points***

- ☐ Blocking – Halting the direction of the interview by saying:
  - “That’s not the way we look at it...”
  - “Let’s back up for a second...”
- ☐ Bridging – Use “connectors” to get to introduce your message
  - “Let’s look at that another way...”
  - “No. But I can say this about that...”
- ☐ Headlining
  - Make most important point first
  - Back it up with “proof points”
- ☐ Flagging - Emphasize YOUR most important points
  - “The most important thing to remember is...”
  - “I’ve talked about many issues today. It boils down to these three things...”

### **Media Do's**

- ☐ Talk about solutions not problems
- ☐ Be likeable, keep calm
- ☐ Use simple, direct answers (no jargon)
- ☐ Repeat messages
- ☐ Pause
- ☐ Use facts, figures, analogies
- ☐ Listen, don't interrupt
- ☐ Stay in your zone of expertise
- ☐ Stay positive

### **Media Don'ts**

- ☐ Don't underestimate the severity of the situation or its potential impacts
- ☐ Don't get cornered with "what if" or "yes/no" questions
- ☐ Don't use jargon
- ☐ Don't swear, use humor, or lose your temper
- ☐ Don't say "no comment"
- ☐ Don't go off the record
- ☐ Don't repeat the negative
- ☐ Don't guess or speculate – if you don't know, offer to find/get the information
- ☐ Don't lie
- ☐ Don't interrupt the interviewer
- ☐ Don't point fingers
- ☐ Don't fixate on the question
- ☐ Don't say it if you don't want to see it

### **Before the Media Opportunity: Understand the Story**

- ☐ Know the publication/program and interview format
- ☐ Determine story angle, participants, and audience
- ☐ Review reporter's background/past coverage
- ☐ Prepare with key messages and a range of practice questions

### **Interviewee's Bill of Rights**

#### *You Have the Right to:*

- ☐ Know the topic, format, deadline
- ☐ Have time to answer the question
- ☐ Correct misstatements
- ☐ Use notes
- ☐ Record the interview

#### *You Do Not Have the Right to:*

- ☐ Know the questions in advance
- ☐ See the story in advance
- ☐ Change your quotes
- ☐ Edit the story
- ☐ Expect your view be the only view
- ☐ Demand an article be published, or not published

## **NATIONAL MANGO BOARD 101**

### **2024 – 2026 Strategic Planning Objectives & Strategies**

#### **The National Mango Board's (NMB) Mission is:**

"To increase the consumption of mango in the U.S., working as a united industry."

#### **The NMB Vision is:**

"For mangos to be an on-going part of every American's diet based on versatility, taste and nutritional benefits, enabling mangos to move toward being a top 10 valued whole fruit in the U.S. market by 2030."

#### **The NMB Values are:**

- Innovation: Provide continuous innovation and education to improve the consumer experience.
- Service: Serve the industry, from grower to consumer regardless of origin or variety, prioritizing the industry's interest over individual-interest.
- Strategy and Science: Belief in research and integrated marketing based on sound-science to create and execute strategic omni-channel programs.
- Adaptability: Being nimble, responding to changing crop and market conditions, focused on long-term industry growth.
- Transparency: Operate with integrity, humility, business ethics, and flexibility.

#### **The NMB Strategic Declaration is:**

"To continue providing reliable and consistent Research and Promotion support to all levels of the fresh mango supply chain, positioning itself as the premier organization in the mango industry. NMB will achieve this by innovating, servicing the industry, adapting to changing conditions and acting with transparency, thus delivering unique value added to all stakeholders in the mango industry."

#### **The NMB will succeed in its strategic intent by focusing on the following Five Key Strategic Pillars:**

- I. Product Quality: Provide key information throughout the supply chain consistently on high-quality fresh mangos and flavor profiles across varieties.
- II. Marketing: Improve market positioning and sector penetration continuously with all relevant consumer audiences for fresh mango.
- III. Consumer Education: Enhance consumer familiarity, understanding, sentiment and purchase of fresh mango through increased knowledge of the versatility, uses, taste, and nutritional value of mango.
- IV. Research: Prioritize research focused on nutrition science, consumer insight, and continuous improvement throughout the supply chain to drive increased mango consumption.
- V. Industry Relations: Provide value-adding services and industry information for fresh mango to support greater efficiency.

**For each of these pillars, there are strategies, objectives and business actions with specific tactics and key performance indicators conducted annually:**

**I. PRODUCT QUALITY: Provide key information throughout the supply chain consistently on high-quality fresh mangos and flavor profiles across varieties.**

**A. Strategic Priorities:**

1. Continue to invest in supply chain research to ensure the best quality fruit comes to market to continually improve the consumer eating experience (e.g. evaluation of protocols for pre- and post-harvest practices, fresh-cut practices, etc.)
2. Improve the expertise throughout the mango supply chain, from growers and production workers to buyers and retail associates regarding quality control, food safety, and handling.
3. Continue to invest in post-harvest best management practices research to provide to retailers and distributors.
4. Formally address climate change issues affecting the mango industry supply chain to be prepared to minimize its adverse effects, and take advantage of relevant opportunities.
5. Build on the current growth in fresh cut products with information for retailers on how to create the best products.

**B. Tactical Activities:**

1. Research the key causes of inconsistency and poor quality. Prepare guidelines for improvement targeted to each link in the supply chain. Distribute the guidelines and hold on-going education programs using in-person and online resources on practices to ensure consistent high-quality products.
2. Focus NMB's production and postharvest research and outreach efforts by collaborating with the industry, researchers, and USDA to improve quality from the field level and throughout the supply chain. Implement a data-based approach and develop a system that continuously gathers information on mango deliveries and uses the information to address the top issues moving forward.
3. Create and implement education programs targeting mango buyers, retail associates, and production workers on quality control, food safety, and handling.
4. Undertake research to determine how best to increase fruit size where possible.

**C. Key Performance Indicators**

1. Outputs:
  - a. Number of projects developed and approved in the product quality field.
  - b. Number of industry members (i.e. growers, packers, processors, handlers, retailers, foodservice members) who are reached with information on food safety and the quality control and consistency guidelines.
  - c. Number of industry members (i.e. growers, packers, processors, handlers, retailers, foodservice members) who engage with the information on food safety and the quality and consistency guidelines.
2. Outcomes:
  - a. Consistency in the fruit quality at the retail level

- b. Consumer satisfaction in the consistency of flavor profile and eating experience from at-retail purchases.
- c. Consumer satisfaction in the quality of the flavor profile and overall eating experience from at-retail purchases.

**II. MARKETING: Improve market positioning and sector penetration continuously with all relevant consumer audiences for fresh mango.**

**A. Strategic Priorities:**

1. **Market Mix Analysis for Optimal Investment Timing:** Conduct comprehensive market mix analyses to identify the best times for marketing investments that drive both short- and long-term consumer demand. Focus on balancing “evergreen” content with seasonal promotions tailored to the timing of mango consumption and fluctuations in supply and demand. This aligns with the 2025 marketing strategy to increase per capita consumption of mangos by strategically placing promotions during peak supply periods.
2. **Optimizing Omni-Channel Marketing Programs:** Continue to refine omni-channel marketing programs targeting specific consumer segments. Ensure all digital materials include actionable “calls-to-action” to drive immediate engagement and conversion. This strategy is supported by entertainment collaborations, to create engaging content that resonates across all digital touchpoints, further enhancing consumer connection to the mango brand.
3. **Continue to Develop a Coherent Brand Framework:** Create a distinctive and consistent brand framework for mangos across all platforms. This framework should incorporate a multifaceted approach, targeting specific demographics and highlighting the unique characteristics and benefits of mangos. Focus on cultivating emotional connections, using storytelling to evoke cherished memories and positive associations with mangos. Collaboration with sports teams provides a unique opportunity to reach diverse audiences and integrate mango branding into the sports fan experience.
4. **Re-Imagining Marketing Programs:** Innovate and revamp marketing programs by emphasizing nutrition, versatility, and the various eating experiences offered by different mango varieties, ripeness levels, and seasons. Highlight these aspects in partnership activations and events, to create a year-round buzz and connect with consumers' health and wellness goals.
5. **Strengthening Retail Programs:** Enhance the retail program through innovative in-store placements and by pursuing co-marketing opportunities with nearby fruits. Tying into the 2025 strategy, this approach focuses on creating visually appealing, high traffic displays that encourage impulse purchases, leveraging retail analytics to identify optimal placement.
6. **Deepening Consumer Insights:** Achieve a better understanding of consumer behavior and potential target markets through digital research, retail data, and social engagement. Utilize these insights to refine the marketing strategy and ensure it aligns with consumer preferences and trends, thereby driving increased demand.

7. Educational Initiatives: Develop robust educational programs on the new website for retailers, food service providers, industry members, and consumers. These programs will position mangos as a versatile, nutritious option, helping to drive overall product sales by educating stakeholders on the benefits and uses of mangos.

## **B. Tactical Activities**

1. Leveraging Advanced Digital Analytics Tools: Utilize advanced digital analytics tools, including Google Analytics, Sprout Social, and 84.51, to evaluate marketing funnel initiatives comprehensively. By employing sophisticated market mix modeling or equivalent analytics, assess the effectiveness of various channels in reaching diverse target audiences with tailored messages. This data-driven approach ensures precise targeting and enhanced message resonance across platforms, supporting our broader goal of increasing mango consumption.
2. Website and Brand Architecture Development: Conduct research to inform the creation of a dynamic website and brand architecture that allows for optimization analyses, effective messaging, and clear calls to action. Customize the website content based on market needs and seasonal variations to maximize consumer engagement and conversion rates.
3. Customized Implementation of Website Strategy: Develop and implement a website strategy that can be customized by market and time of year, ensuring that the content is always relevant and engaging for visitors. This customization will be vital in supporting ongoing campaigns and events, like sports partnerships and the Mango Joyride, to maintain consumer interest and drive sales.
4. Bi-Annual Consumer Segmentation Surveys: Conduct bi-annual consumer segmentation surveys to inform segment-specific marketing decisions. These surveys will provide valuable insights into consumer preferences and opportunities, enabling targeted messaging that resonates with different audience segments.

## **C. Key Performance Indicators**

1. Outputs:
  - a. Website Optimization and Functionality: Ensure the website operates at peak efficiency, offering both immediate and long-term functionality tailored to user needs. This includes integrating features that support co-branded content from partnerships with entities like Disney and sports teams.
  - b. Unified Social Media Engagement: Achieve consistent and coherent posting strategies across all social networks to enhance brand presence and drive engagement. Leverage content from entertainment collaborations and sports partnerships to foster community interaction and loyalty.
  - c. Brand Message and Tagline Integration: Secure comprehensive penetration of brand-specific messaging across all relevant channels, grounded in our strategic brand architecture.
2. Outcomes:
  - a. Brand Recognition Among Target Audiences: Track the percentage of target audiences that recognize and resonate with both the tangible benefits and

emotional values of our brand positioning. Monitor engagement metrics from sports and entertainment partnerships to assess effectiveness.

- b. Mango Market Expansion: Document growth in per capita mango availability and consumption, using retail analytics tools to measure success. Focus on leveraging retail partnerships to expand mango placement and visibility in stores.
- c. Measurements:
  - i. Click-Through Rate (CTR): Measure the percentage of users who click on digital mango-related ads, indicating engagement.
  - ii. Social Media Engagement: Analyze likes, shares, and comments on mango content across platforms to gauge audience interest. Include metrics related to content from entertainment and sports partnerships.
  - iii. Cost per Click (CPC): Evaluate the cost efficiency of digital ad campaigns based on the price paid for each click.
  - iv. Return on Ad Spend (ROAS): Calculate the revenue generated for every dollar spent on digital advertising for accurate ROI assessment.
  - v. Social Media Follower Growth: Track the increase in mango enthusiasts following the National Mango Board on social media, driven by engaging content from collaborations and campaigns.
  - vi. Video Views: Measure the number of views on mango-related videos, including content from entertainment collaborations and sports partnerships, to assess the effectiveness of video content marketing.
  - vii. Track Digital-to-Retail Sales Reporting: Use retail analytics tools to measure the impact of digital marketing efforts on in-store sales, ensuring a strong connection between online engagement and retail outcomes.

**III. CONSUMER EDUCATION: Enhance consumer familiarity, understanding, sentiment and purchase of fresh mango through increased knowledge of the versatility, uses, taste, and nutritional value of mango.**

**A. Strategic Priorities:**

- 1. Mango.org B2C Enhancement: Elevate the Mango.org website to be more consumer-centric, ensuring an engaging and informative online experience that directly caters to the needs and interests of individual consumers.
- 2. Mango Varietal Education: Illuminate the unique characteristics of different mango varieties, emphasizing optimal uses for each to enhance consumer understanding and enjoyment.
- 3. Ripeness Selection Guidance: Provide clear and accessible information on gauging ripeness and choosing/picking fresh mangos, empowering consumers to make informed decisions.
- 4. Fresh Mango Preparation Resources on website: Develop comprehensive guides on how to prepare fresh mangos, offering innovative and user-friendly recipes to encourage consumer exploration in the kitchen.

5. **Flavor Spectrum Versatility:** Showcase the versatility of mangos across the flavor spectrum, inspiring consumers to experiment with this delicious fruit in a variety of culinary applications.
6. **Health and Nutritional Advocacy:** Promote the health and nutritional benefits of regular mango consumption as an integral part of a sustainable and balanced diet, emphasizing the positive impact on overall well-being.

## **B. Tactical Activities**

1. Conduct comprehensive consumer research through surveys and focus groups to identify and understand the barriers to consumption, alongside strategies for overcoming them. This research should be designed to facilitate optimization analysis across four key dimensions: messaging, channels, spokespersons, and timing. Additionally, the research should assess how different factors influence consumption patterns and explore potential unique advantages that could enhance consumer engagement.
2. Develop and execute a multifaceted consumer education strategy aimed at dismantling the identified consumption barriers and fostering growth in key strategic areas. This strategy should leverage all available communication channels to reach a broad audience, with a special emphasis on engaging the upcoming generation of consumers. The educational content will be tailored to address and rectify misconceptions, enlighten consumers about the benefits, and ultimately encourage increased consumption.
3. Collaborate with dietitians and nutritionists across various platforms, including retail outlets, foodservice establishments, online environments, and other relevant settings, to amplify consumer education efforts. This initiative will focus on disseminating accurate and compelling information about the nutritional advantages of consuming mangoes, with a particular emphasis on enlightening both current and future generations. The goal is to cultivate a well-informed consumer base that recognizes the health benefits of mangos, thereby driving increased consumption.

## **C. Key Performance Indicators**

1. Outputs:
  - a. **Consumer Interaction Metrics:** Track reach, engagement, and conversion metrics as outlined in the NMB Communication and Marketing KPI Framework (Appendix B). Key data points include:
    - i. Reach (number of consumers exposed to messaging).
    - ii. Engagement (interactions such as likes, shares, comments).
2. Outcomes:
  - a. **Consumer Understanding:** Measure the percentage of consumers who demonstrate an understanding of each strategic focus area. Key data points include:
    - i. Pre- and post-campaign awareness levels.
    - ii. Insights from focus groups indicating consumer comprehension and sentiment.



- b. Purchase and Advocacy Rates: Determine the percentage of consumers purchasing and recommending mangos. Key data points include:
  - i. Sales data pre- and post-campaign from retail data tools.
  - ii. Advocacy levels via social mentions and recommendation surveys.

**RESEARCH:** Prioritize research focused on nutrition science, consumer insight, and continuous improvement throughout the supply chain to drive increased mango consumption.

**A. Strategic Priorities:**

1. Develop and implement an approach for all research nutrition projects that weighs the probability of success and resulting benefits versus cost.
2. Develop specific strategic nutrition and consumer research roadmap for the next 3-5 years for review by the relevant committees and based on clear industry benefits. This should include health benefits from mango consumption. Work in tandem with the marketing and consumer education pillars to determine the best science-based nutrition and health messaging to mango consumers.
3. Benchmark with the heads of nutrition research committees of other R&P commodity boards to determine common research opportunities and efficiencies.
4. Educate nutrition science community on the health value of mangos through participation in and partnership with scientific conferences and educational organizations.
5. Share mango health research outcomes through new research education materials to be available at [www.mango.org](http://www.mango.org).
6. Promote the awareness, understanding and benefits of the NMB's Health Research Program among influential health & nutrition organizations.
7. Educate Dietary Guidelines of America (DGAC) members on the scope of the NMB's health research program and key findings related to mangos and human health.

**B. Tactical Activities**

1. Create procedures that allow for prioritization, ranking and choosing optimal nutrition-based projects for execution.
2. Undertake nutrition research projects to support the strategic nutrition and consumer research roadmap.
3. Engage in formal interactions with other R&P board to jointly explore research opportunities that would deliver benefits to shared target audiences/consumers, as well as cost efficiencies.
4. Submit presentation proposals to scientific conferences, sponsor educational sessions and webinars through scientific organizations, and promote mango research presented at scientific conferences.
5. Develop research summary fact-sheets highlighting key published findings from the main focus areas of health & nutrition research.
6. Work with organizations such as the USDA Center for Nutrition Policy and Promotion (CNPP), Department of Health and Human Services (DHHS), and/or USDA

- Agriculture Research Services to disseminate NMB nutrition health research information.
7. Provide USDA approved written and/or oral comments to the DGAC during key comment periods.

### **C. Key Performance Indicators**

1. Outputs:
  - a. Development of methodology and the tool to be used to evaluate feasibility of nutrition-based projects for execution.
  - b. Number of projects developed and approved in the nutrition-based projects.
  - c. Number of complete interactions with other R&P Boards.
  - d. Number of NMB interactions, participation, promotion and sponsorship in scientific conferences and health and nutritional organizations, educational sessions, and webinars pertinent to nutrition research.
  - e. Number of research factsheets and other research materials published and distributed amongst influencers, the scientific community and industry members.
  - f. Number of nutrition research projects (completed and peer-reviewed articles published.)
2. Outcomes:
  - a. Higher visibility and understanding of the nutritional value of mangos at the consumer level, nutrition health influencers, the scientific community, and health and nutritional organizations.
  - b. Increased mango consumption.
  - c. Percentage of consumers, influencers, nutritionists, and industry members, who are aware of the health benefits of mangos.

## **VI. INDUSTRY RELATIONS: Provide value-adding services and industry information for fresh mango to support greater efficiency.**

### **A. Strategic Priorities**

1. Bring the industry together across all supply chain segments to build a common base of knowledge and collaboration that add value and improve supply chain efficiencies to further strengthen the mango industry.
2. Building off existing programs, develop and provide data, research and information to the industry to facilitate: a more efficient and sustainable supply; a thorough understanding of demand and its drivers; and knowledge of broader societal trends.
3. Increase the levels of transparency in how assessments are used to benefit the entire mango industry with clarity on expenditures by category and result benefits to the industry.
4. Have on-going engagement programs and activities with industry members across the supply chain that drive understanding and trust in the allocation of assessment funds.

## **B. Tactical Activities**

1. Develop, implement and enhance tools and forecast models to get more specific data regarding mango import volume from the Foreign Mango Organizations (FMO).
2. Create and execute outreach meetings, webinars and workshops, attending and participating in industry conferences to keep the mango industry informed on all the marketing and research activities conducted by the NMB. Involve industry members to participate in the outreach meetings, webinars and workshops in order to bring support for the NMB programs.
3. Identify research ideas and opportunities throughout the supply chain in order to add value and increase efficiency, sustainability, productivity and quality.
4. Develop and maintain crisis plans, including a crisis manual to prepare the entire mango supply chain to be able to react rapidly when industry or societal issues arise.
5. Continually review the MAVIS program performance so that it provides accurate information to industry participants helping them to optimize marketing initiatives relative to the timing of promotional efforts. Establish a threshold of industry participation for the success of the program.
6. Execute regular meetings including an annual meeting with the foreign mango organizations to share information, common goals, best practices, and improved transparency, generating trustworthy relationships and optimal information sharing.
7. Continually update best food safety and sustainability practices to share with the industry.
8. Deliver an annual industry survey to measure the overall industry member level of satisfaction with the NMB programs.

## **C. Key Performance Indicators**

1. The number of entities contributing information to the Mango Volume and Inventory System and the overall percentage of volume handled by program participants.
2. Number of outreach meetings, webinars and workshops conducted providing successful metrics as follows:
  - i. Overall event satisfaction;
  - ii. Quality of information;
  - iii. Applicability and implementation of information; and
  - iv. Likelihood of attending other NMB program/activities
3. Number of visits & number of industry members that have downloaded the Food Safety Apps, research reports and subscriptions to the sustainability program.
4. Percentage of industry members who are satisfied with the way the NMB is fulfilling its mission (awareness, understanding the mission, positive perception with brand marketing and research programs, industry support, managerial trust, etc.)
5. Number of industry members subscribed to the crop report (crop report average open rate and click-through rate)
6. Number of podcasts produced and published and viewership rate reach.
7. Number of (NMB related programs and activities) articles published in print and online.

In summary, the combined efforts of diverse teams working together in interdisciplinary projects and initiatives, diminishing silos and creating significant efficiencies in the work performed in each of the specialty areas (pillars), will continue to generate positive outcomes in the fulfillment of the NMB mission, positioning itself as the premier organization providing support and expertise in the mango industry. This strategic plan is a dynamic document that shall be revised yearly and reevaluated again for the period 2027-2029.

## General Mango Messages

### Consumer Trends

- Demand for mangos among current purchasers is substantial. Nearly all current purchasers surveyed by the NMB plan to continue buying mangos.
- Consumers are more likely to eat mangos as an ingredient rather than just simply eating the tropical fruit by itself. For example, enjoying mangos at a restaurant or a friend's home.
  - With that in mind, NMB has created a wide variety of recipes for consumers – ranging from sweet to savory.
- Consumers who buy mangos like their flavor and believe that they are a nutritious, exotic fruit that is perfect for a special treat.
  - This makes mangos a perfect ingredient in recipes for entertaining. NMB's Mini Cupcakes with Mango Buttercream recipe is a great example of fun twist on a familiar recipe.

### Flavor

- The exotic flavor of mangos gives dishes and drinks an unsurpassed freshness, reminiscent of tropical vacations and sun-drenched beaches. Like a vacation in your kitchen.
- Mangos add a burst of flavor to all kinds of dishes, year-round. Their sweet, unique flavor is versatile and can make any dish exceptional, no matter the occasion.
- For the most robust flavor, use fresh mango to make your own puree.

### Year-Round Availability

- Mangos are one of the world's most popular fruits and are available year-round, so you can always get your hands on a perfect mango.
- Six varieties of mango make up the bulk of what is available in the United States. Because each variety comes into season at a different time of year, you will always find a mango in your produce aisle.
- While there are more mangos in the market during the summer than any other season, this tropical fruit can bring that burst of sunshine to your table any time of year.

### Selecting

- Color is not always the best way to judge a mango's ripeness. Simply squeeze it gently. The mango should give slightly, but not be too soft. Similar to a ripe peach or avocado.
- A firmer mango would be a good choice if you do not plan to eat it for several days.
- Keep unripe mangos at room temperature. Never refrigerate mangos before they are ripe.

### Preparing/Usage

- A mango has one, large seed in the center of the fruit. By simply cutting off the sides of the mango, you can access the flesh and slice, dice, or puree as needed.
- The flavor of mango complements many foods including grilled meats, such as chicken, pork and lamb and other fruits such as coconut, pineapple and berries.

### Nutrition

- One serving (3/4 cup) of mango is an excellent source of vitamin C and a good source of folate and copper for 70 calories.
- One serving (3/4 cup) of mango also provides 7% of your daily dietary fiber requirement.

- Mangos are a true superfruit, containing over 20 different vitamins and minerals and each serving is fat-, sodium-, and cholesterol-free.

#### “Slice and Scoop” Cutting Method

Always wash the mango before cutting and use a clean knife and cutting board. The slice and scoop method is an easy way to cut a mango.

- 1) Stand the mango on your cutting board stem end down and hold. Place your knife about ¼-inch from the widest center line and cut down through the mango. Flip the mango around and repeat this cut on the other side. The resulting ovals of mango flesh are known as the “cheeks.” What is left in the middle is mostly the mango seed.
- 2) Cut parallel slices into the mango flesh, being careful not to cut through the skin.
- 3) Scoop the mango slices out of the mango skin using a spoon.

#### Sustainability of Importing Mangos

- Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates. This means the majority of mangos consumed in the U.S. are imported with care from countries such as Brazil, Ecuador, Guatemala, Haiti, Mexico and Peru.
  - This is very similar to produce such as bananas, coffee, and other foods that can only be grown in certain regions.
- The mango industry uses the most effective and efficient means for distributing fresh mangos.
- The mango industry could have a positive impact on carbon dioxide levels due to mango groves that contribute to carbon sequestration, according to our first Sustainability Assessment.

## **Frequently Asked Questions**

### **What is the National Mango Board's vision?**

For mangos to move from being an exotic fruit to a daily necessity in every U.S. household.

### **What is the National Mango Board's mission?**

Increase the consumption of mango in the U.S. by inspiring consumers and educating them about the culture, flavor, and nutrition of mangos, while bringing the industry together.

### **What is the National Mango Board?**

The NMB is an agriculture promotion group supported by assessments from both domestic and imported mangos. The board was created to drive awareness and consumption of mango in the United States. The NMB works toward this mission through four core programs: marketing, communications, research, and industry relations.

Mango availability per capita has increased 73 percent since 2005 to an estimated 3.25 pounds per year in 2019. Mango import volumes are up from 62 million boxes in 2005 to 119 million boxes in 2019. According to Consumer Research done by NMB in 2020, 55 percent of U.S. customers purchased mangos within the past 6 months.

### **Why is the National Mango Board trying to promote mangos in the United States?**

The NMB likes to think of mangos as the soccer of fruit. They are one of the world's most popular fruits, but they're not yet as well known among U.S. consumers. It is the board's mission to show U.S. consumers why the rest of the world loves mangos!

### **Where is the National Mango Board headquarters located?**

Orlando, Florida.

### **Why is it located there?**

Key staff members live in Orlando, Florida.

### **Who are the board members?**

It is an 18-member board consisting of a First Handler, Importers, Foreign Producers and Domestic Producers. Each position comes with a three-year term. Each year, the mango industry goes through a nomination process to fill positions that will be available at the end of that year. More information about the nominations process is available in on NMB's website at: <http://www.mango.org/en/nominations>.

### **How should I store or ripen my mango?**

- Keep unripe mangos at room temperature. Mangos should not be refrigerated before they are ripe.
- To speed up ripening, place mangos in a paper bag at room temperature.
- Once ripe, mangos should be moved to the refrigerator, which will slow down the ripening process. Whole, ripe mangos may be stored for up to five days in the refrigerator.
- Mangos may be peeled, cubed and placed in an airtight container in the freezer for up to six months.

### **What are the different varieties of mangos?**

There are hundreds of mango varieties in the world. In the United States, you're likely to find up to six varieties in your grocery store throughout the year. Those varieties are Ataulfo, Francis, Haden, Keitt, Kent, and Tommy Atkins. For more on varieties and when they are available visit <https://www.mango.org/about-mangos/>

### **Do mangos cause allergic reactions?**

Some consumers experience a mild allergic reaction to the oil, called urushiol, found naturally on the skin of a mango. Consumers who love mangos but are concerned about potential allergic reactions may want to try fresh cut mango that has already been peeled and cut.

### **When is mango season?**

Mango-producing countries harvest mango crops at different times of the year, which means we get to enjoy mangos year-round. The mango year has two seasons, one in the spring/summer and one in the fall/winter. The two seasons overlap to provide a year-round supply.

### **Where do mangos come from?**

Mangos are grown all over the world in tropical regions. In the United States, we get the majority of our mangos from Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru.

### **Is there any domestic production of mangos?**

Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates. This is very similar to produce such as bananas, coffee, and other foods that can only be grown in certain regions. Mangos have been grown in the United States for a little more than a century, but commercial, large-scale production here is limited. Mangos need a tropical climate to flourish, and only Florida, California, Hawaii, and Puerto Rico have the right environment to grow mangos. These domestic regions produce less than one percent of the mangos consumed in the United States due to the climate.

### **I thought India produced the most mangos?**

India produces about 40 percent of the world's mangos and consumes much of the domestic production domestically, but few Indian mangos are imported to the United States each year.

### **What is hot water treatment?**

Hot water treatment is used to control pests that live in producing areas and keep them from traveling to the United States. The process consists of immersing mangos in hot water to bring the pulp to a specific temperature. Hot water treatment has been approved by USDA as a quarantine treatment for the control of pests.

### **Are mangos irradiated? What is irradiation exactly?**

Irradiation is a protocol approved by USDA as a quarantine treatment for the control of pests.. A small portion of the mangos sold in the United States may receive irradiation treatment.

Food irradiation is the process of exposing food to a carefully measured EPA and FDA-approved amount of ionizing radiant energy (e.g., electrons, gamma rays, or X-rays), which travel through the food. The [FDA](#) has [approved](#) a variety of foods for irradiation, including chicken, turkey, beef, pork, shellfish, spices and seasonings, fruits and vegetables, and shell eggs.

[Health authorities stress](#) that irradiated food does NOT become “radioactive,” and the nutritional value of irradiated foods is not changed in any significant way at the doses used.



## **Mango Facts**

### **Did you know...**

- Mangos are one of the most popular fruits in the world.
- Mangos were first grown in India over 5,000 years ago.
- Mango seeds traveled with humans from Asia to the Middle East, East Africa, and South America beginning around 300 or 400 A.D.
- The paisley pattern, developed in India, is based on the shape of a mango.
- A basket of mangos is considered a gesture of friendship in India.
- Legend says that Buddha meditated under the cool shade of a mango tree.
- Mangos are related to cashews and pistachios.
- A mango tree can grow as tall as 100 feet.
- The bark, leaves, skin, and pit of the mango have been used in folk remedies for centuries

### **Mango Selection and Ripening**

- Don't judge a mango by its color – red does not mean ripe.
- Squeeze gently to judge ripeness.
- A ripe mango will “give” slightly, and a firm mango will ripen at room temperature over a few days.
- To speed up ripening, place mangos in a paper bag at room temperature.
- Once ripe, mangos can be moved to the refrigerator to slow down ripening for several days.

### **Eating Mangos**

- In many Latin American countries, mango on a stick with the skin peeled back is sold by street vendors.
- Mangos can be enjoyed with salt, lime juice or chili powder for a unique flavor experience.
- Mangos have natural tenderizing properties, making them a perfect ingredient for marinades.
- Try the versatile mango in smoothies, salads, salsas, chutneys, on fish, chicken or pork, as a dessert, or just plain as a delicious snack.

### **Mango Varieties, Seasons and Sources**

- Most of the mangos sold in the United States come from Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru. Mangos are available all year long.
- Most of the mangos sold in the United States are one of six varieties: Ataulfo, Francis, Haden, Kent, Keitt, and Tommy Atkins.

USDA-Approved Nutrition Messages

GENERAL NUTRITION	
One serving (3/4 cup) of mangos is 70 calories, so it's a sweet treat that won't weigh you down.	
Each serving of mango is fat free, sodium free and cholesterol free.	
Mangos contain over 20 different vitamins and minerals, helping to make them a superfood.	
NUTRIENT CONTENT & STRUCTURE FUNCTION	
Vitamin A	
Nutrient Content	Structure Function
One serving (¾ cup) of mango provides 8% of your daily vitamin A (needs/requirements).	<p>Vitamin A is critical for vision.</p> <p>Vitamin A is important for immune function.</p> <p>Vitamin A may be important for reproductive health.</p> <p>Vitamin A helps maintain healthy skin.</p>
Vitamin C	
Nutrient Content	Structure Function
<p>One serving (¾ cup) of mango is an excellent source of (high potency/the antioxidant) vitamin C.</p> <p>One serving (¾ cup) of mango provides 50% of your daily vitamin C (needs/requirements).</p>	<p>Vitamin C supports healthy cognitive and neurologic function.</p> <p>Vitamin C is required for collagen formation.</p> <p>Vitamin C increases the absorption of non-heme iron, or the form of iron present in plant-based foods.</p> <p>Vitamin C plays an important role in immune function.</p> <p>Vitamin C is important for wound healing.</p> <p>Vitamin C keeps gums and teeth healthy.</p>

Folate	
Nutrient Content	Structure Function
One serving (¾ cup) of mango is a good source of folate.	Consuming adequate folate before and during pregnancy may help reduce a woman's risk of having a child with a brain or spinal cord defect.
One serving (¾ cup) of mango provides 15% of your daily folate (needs/requirements).	Folate helps the body make red blood cells and DNA.  Folate supports healthy cardiovascular function.
Vitamin B6	
Nutrient Content	Structure Function
One serving (¾ cup) of mango provides 8% of your daily vitamin B6 (needs/requirements).	Vitamin B6 is involved in immune function.  Vitamin B6 plays a role in cognitive development.  Vitamin B6 helps the body maintain normal blood sugar levels.  Vitamin B6 helps the body make hemoglobin, which carries the oxygen in red blood cells to tissues throughout the body.  Vitamin B6 helps maintain normal nerve function.
Copper	
Nutrient Content	Structure Function
One serving (¾ cup) of mango is a good source of copper.	Copper helps form red blood cells.
One serving (¾ cup) of mango provides 15% of your daily copper (needs/requirements).	Copper supports healthy immune function.  Copper helps to maintain bone health.
Fiber	
Nutrient Content	Structure Function
One serving (¾ cup) of mango provides 7% of your daily fiber (needs/requirements).	Fiber makes you feel full faster and therefore may help support weight management.  Fiber aids digestion.  Fiber helps control constipation.  Fiber slows the absorption of sugar into the bloodstream.

## COMMUNICATION MATERIALS

### ***National Mango Board's Mission***

Increase the consumption of mango in the U.S. by inspiring consumers and educating them about the culture, flavor, and nutrition of mangos, while bringing the industry together.

### **About National Mango Board**

The [National Mango Board](https://mango.org) is an agriculture promotion group supported by assessments from both domestic and imported mangos. The board's vision is to move mangos from being an exotic fruit to a daily necessity in every U.S. household by driving awareness and consumption of fresh mango in the U.S. marketplace. One serving ( $\frac{3}{4}$  cup) of the superfruit mango contains 70 calories, 50% of daily vitamin C, 15% of daily folate, 15% of daily copper, 8% of daily vitamin A, 8% of daily vitamin B6, 7% of daily fiber, and an amazing source of tropical flavor. Learn more at [mango.org](https://mango.org).

## ISSUES ANALYSIS AND TALKING POINTS

Based on a current understanding of the food safety and issues management arena, the following issues have been identified as potential scenarios the mango industry could face.

For each issue, suggested "placeholder" messaging has been provided for responding to media inquiries. These general messages, while very broad and non-specific, allow a designated NMB spokesperson to cooperate with media inquiries, filling the need for immediate response while also indicating that there must be more information gathered before further information is released. It must be made clear that NMB is not responsible for the operations of its industry members collectively but does advocate adherence to regulations and production standards within each of the operating regions.

Specific to each issue, various expert contacts have been identified to expedite consultation on specific issues and to help determine what, if any, additional response may be needed.

## **National Mango Board's Business Practices**

**[National Mango Board's Role, Value and Assessments](#)**

**[National Mango Board and Controversial Issues](#)**

## **National Mango Board's Role, Value and Assessments**

### **Background**

The National Mango Board (NMB) is an agriculture promotion group, which is supported by assessments on domestic and imported mangos. The board's mission is to increase awareness and consumption of fresh and frozen mango in the United States. The board works toward this mission through the following core programs: marketing and communications, and research and industry relations.

The NMB was established by the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service (AMS) in 2005. Every five years, mango industry members vote to continue the program. In 2015, [more than 90 percent of the industry](#) supported the continuation of NMB's work. This is an 18-point increase in support since 2010. The industry again supported the continuation of the NMB in 2020. The next industry vote is in 2025.

A potential issue the board may face is the mischaracterization of board assessment fees as a tax on U.S. consumers. NMB's work is funded through an assessment paid by first handlers and importers of fresh mango. The assessment for fresh mango is ¾ cent per pound paid by first handlers and importers of 500,000 pounds or more of fresh mangos per year. The board uses the funding for non-brand-specific promotional and marketing programs that help increase demand for fresh mango in the United States. Additionally, like many/other agricultural promotion groups, the board reimburses USDA and AMS any expenses that the agencies may incur in their oversight of the board's work.

Source: AMS – [Mango Promotion, Research and Information Order](#)

### **Talking Points**

- NMB's goal is to increase consumer consumption of and demand for mangos in the United States.
  - One of the most popular fruits in the world, mangos are an excellent source of vitamin C and a good source of folate and copper. One serving (¾ cup) of mango is a great snack, with just 70 calories.
- NMB's work includes marketing and communications, and research and industry relations. For example:
  - Creating point-of-purchase sales materials that retailers use in their stores to promote mangos to consumers.
  - Developing comprehensive media outreach programs to increase mango awareness among consumers.
  - Conducting research to track sales trends and consumer preferences.
  - Providing the industry with best practices that help continuously improve the safety and quality of mangos.
- NMB's work is funded solely by the mango industry. While USDA and AMS provide oversight, their expenses are reimbursed by NMB.
  - Approximately 99% of all mangos sold in the U.S. are imported, and importers and first handlers provide the NMB with the majority of its budget through assessments they pay.
  - NMB provides its members with information and research that help them grow, harvest and sell high-quality, safe, nutritious mangos.

- NMB does not advocate or lobby for policies or regulations on behalf of the mango industry. However, the board does facilitate educational dialogue between industry members and the appropriate agencies as necessary.

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## **National Mango Board and Controversial Issues**

### **Background**

The National Mango Board (NMB) is an agriculture promotion group, which is supported by assessments on domestic and imported mangos. The board's mission is to increase awareness and consumption of fresh mango in the United States.

On occasion, mangos may be involved in negative or controversial stories. Examples of issues that could draw scrutiny include:

- Some individuals and groups object to all agriculture promotion groups and regularly call for their elimination.
- An industry-wide debate regarding the relative merits of hot water treatment versus irradiation.
- An individual NMB staff member or board member's actions reflect negatively on the industry generally or NMB specifically (e.g., a staff member posts a disparaging comment about the mango industry on a social media channel that goes viral).
- Animal welfare groups may criticize NMB for studies it supported pre-2014

These types of issues will be monitored by the NMB staff board; responses will be determined on a case-by-case basis with the goal of providing accurate information to selected audiences in a timely manner. Below are general messages about the board and its work.

### **Talking Points**

- NMB's mission is to increase consumer consumption of and demand for fresh mango in the United States.
- NMB's work includes marketing support, research and industry relations. For example:
  - Creating point-of-purchase sales materials that retailers use in their stores to promote mangos to consumers.
  - Developing comprehensive media outreach programs to increase mango awareness among consumers.
  - Conducting research to track sales trends and consumer preferences.
  - Providing the industry with best practices that help continuously improve the safety and quality of mangos.
- NMB facilitates educational dialogue between industry members and the appropriate agencies as necessary with the goal of providing consumers with mangos they can enjoy all year.

*If asked about an individual staff member or board member's actions:*

- NMB's mission is to increase consumer demand for fresh mango by highlighting their great taste and nutritional benefits. While we are very disappointed by these comments, we cannot comment on the individual in question. <or if the situation is unclear –These are serious claims, and we are looking into them. > Instead, we will continue to focus on providing consumers with mangos they can enjoy time and again.



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## **Plant Health & Production Practices**

### **Controlling Points of Potential Phytosanitary (Plant) Contamination**

#### **Hot Water Treatment and Irradiation**

#### **Pest Detection and Control**

#### **Chemical Residues (Crop Protection Materials)**

#### **Malathion**

#### **Water Quality**

#### **Calcium Carbide as a Ripening Agent**

## **Controlling Points of Potential Phytosanitary (Plant) Contamination**

### **Background**

All mangos sold in the U.S. must comply with all applicable agricultural regulations, including The Plant Protection Act that gives the USDA's Animal and Plant Health Inspection Services (APHIS) the authority to inspect imported fruits and vegetables. Inspections may occur at airports, maritime, or land border locations and are conducted in accordance to the USDA's [Fruits and Vegetables Import Requirements](#) by agents:

- Customs and Border Protection (CBP) officers
- CBP agricultural specialists
- Plant Protection and Quarantine officers

Beginning in 2007, NMB led a review of the best postharvest practices among the mango industry with the goal of improving the safety, quality, and consistency of mangos. The results were compiled in the "[Mango Postharvest Best Management Practices Manual](#)" and made publicly available and updated in 2014. The manual covers mango production and distribution from grove to retailer and foodservice outlets; it complements NMB's work to promote mango purchases and to provide consumers information on the best ways to select and prepare mangos.

### **Talking Points**

- NMB and its members promote adherence to USDA's Fruits and Vegetables Import Requirements.
- NMB developed the "Mango Postharvest Best Management Practices Manual" to help growers comply with USDA requirements while also improving product quality.

## **Hot Water Treatment and Irradiation**

### **Background**

*Hot Water Immersion Treatment:* Hot water immersion treatment (also called hydrothermal treatment) uses heated water to raise the temperature of the commodity to the required temperature for a specified period of time. This is used primarily for certain fruits that are hosts of fruit flies but may also be used for nursery stock for a variety of pests. (*Source: USDA*)

*Irradiation:* This technology was first approved by USDA's Animal Plant Health and Inspection Service (APHIS) in 1997 for use on papayas from Hawaii for export to the U.S. mainland, Guam, Puerto Rico, and the U.S. Virgin Islands. In 2002, irradiation was approved as a phytosanitary treatment for all admissible fresh fruits and vegetables from all countries. The objective of phytosanitary treatments is to prevent the introduction or spread of regulated pests. As a phytosanitary treatment, irradiation may reduce the risk of introduction by achieving certain responses, known as "endpoints," in the targeted pest(s). (*Source: USDA*)

APHIS certifies facilities for treatment services, equipment, and procedures in conjunction with the Center for Plant Health Science Technology. Treatment specifics are outlined in the [USDA Treatment Guide](#) which can be found on the APHIS website.

In 2010, NMB issued its “[Mango Postharvest Best Management Practices Manual](#),” which includes recommendations for using hot water treatment to reduce the spread of pests. These recommendations, updated in 2014, are in accordance with USDA and APHIS requirements and provide the entire mango industry with tools to continuously improve their plant health practices.

### Talking Points

- To help continuously improve plant safety ~~safety~~ and mango quality, NMB issued the “Mango Postharvest Best Management Practices Manual,” which is publicly available on [www.mango.org](http://www.mango.org). While the NMB cannot enforce regulations among its members, we do work with them to ensure they have access to accurate information regarding compliance with all applicable requirements.
- The NMB is made up of both U.S. and non-U.S. growers. We care deeply about U.S. Agriculture, and like other growers, we use a number of methods to prevent pests from leaving their native groves.
- Hot water treatment is the most commonly used treatment for mangos available in the United States and helps reduce the presence of pests.
  - Pests such as the fruit fly could severely damage U.S. agriculture unless eradicated before produce is imported to the United States.
- First approved for use in 1997 by APHIS, irradiation is another ~~newer~~ method for reducing the presence of pests.
  - Most growers who export mangos to the United States are using hot water treatment instead.

### Social Media Messaging

- Hot water treatment is the most common way in which mango growers reduce the presence of pests on mangos. Mango growers use it to eliminate unwanted pests such as the fruit fly.

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## **Pest Detection and Control**

### **Background**

Pests and diseases pose a serious, plausible threat to the livelihood of the mango industry with potential adverse effects on sales price, volume, and importation. For example, in 2013, the Florida orange industry was negatively affected by citrus greening and the global banana export industry was managing the threat of a particular soil fungus - *Fusarium oxysporum f. sp. Cubense*. Both issues not only affected their respective industries but received significant media coverage.

The USDA's Animal and Plant Health Inspection Service (APHIS) serves to facilitate safe trade, monitor the movement of risk material, protect against the introduction of pests, and regulate the import and export of plants. USDA's [Fruits and Vegetables Import Requirements](#) provides background, procedures, and reference tables for regulating imported articles of fresh, usable parts of plants, such as fruits, stems, leaves, roots, and flowers (herbs and vegetables). In the event that a pest or disease of concern is detected, APHIS implements emergency protocols and partners with affected states to quickly manage or eradicate the outbreak.

Complementing the standards set by USDA / APHIS, NMB published its "[Mango Postharvest Best Management Practices Manual](#)," which includes specific steps producers can take to reduce and even eliminate the presence of harmful pests. For example, the best practices manual outlines steps that can be taken to improve hot water treatment processes in accordance with APHIS' requirements for pest prevention.

### **Talking Points**

- First and foremost, NMB encourages its growers and importers to enforce and uphold U.S. importation standards as regulated by the USDA's Animal and Plant Health Inspection Service.
- NMB's best practices manual was developed with the goal of continuously improving the quality of mangos while protecting plant health.

### **Social Media Messaging**

- The mango industry is committed to delivering high-quality products to consumers while protecting U.S. agriculture. We will monitor the situation and work closely with our members to ensure that you can enjoy mangos with your family and friends year around.

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## **Chemical Residues (Crop Protection Materials)**

### **Background**

The U.S. Environmental Protection Agency (EPA) regulates the use of pesticides, fungicides and other chemicals that may be used in the production of mangos sold in the U.S. Mangos grown outside of the United States must comply with both the regulations of their countries of production and with U.S. requirements.

Pesticides, fungicides and other crop protection materials are used by growers to help ensure plant health and the quality of mangos. For example, mangos are susceptible to anthracnose, a type of plant disease that can reduce the crop size and damage the fruit quality, making it unappealing to consumers. Mango growers use fungicide on the trees to limit the spread of this plant disease before and during mango tree flowering.

However, when used in accordance with EPA regulations, the possible trace amounts of crop protection materials on mangos purchased by consumers are nearly undetectable. In fact, after reviewing the U.S. Department of Agriculture's (USDA) [Pesticides Data Program](#) Annual Summary, the Environmental Working Group has repeatedly listed mangos on their "[Clean 15](#)" list of produce with the lowest detectable levels of pesticides.

### **Talking Points**

- USDA research has shown that mangos have some of the lowest levels of chemical residues of all produce tested in the United States.
  - In reviewing USDA's research, the Environmental Working Group named mangos to their "Clean 15" list of produce with the lowest levels of chemical residues in 2018, 2022 and 2023.
  - Mango has never been listed on the EWG's list of foods with comparatively more residues.
- The mango industry relies on the limited use of pesticides to help ensure the safety and quality of mangos. NMB encourages all members of the mango industry to comply with all U.S. regulations regarding the use of pesticides.

### **Social Media Messaging**

- USDA research has shown that mangos have some of the lowest levels of chemical residues of all produce tested in the United States. In fact, the Environmental Working Group once again named Mangos to their "Clean 15" of produce in 2023.

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## **Malathion**

### **Background**

The EPA regulates the use of pesticides, fungicides, and other chemicals that may be used in the production of mangos that are sold in the U.S. Mangos grown outside of the United States must comply with the regulations of their countries of production and with U.S. requirements.

Malathion is an insecticide used in agriculture, home gardens, and on pets to control insects like mosquitos, aphids, ants, fleas, and ticks. Since its first use over five decades ago, the EPA has determined that careful application poses no human threat. Additionally, malathion easily dissipates when exposed to water and sunlight, with nearly imperceptible amounts on mangos purchased by consumers.

USDA restricts residue levels to 8.0 ppm.

Furthermore, EPA and FDA regulations strictly limit the amount of pesticide residue allowed on crops. The Environmental Working Group has listed mangos on their "[Clean 15](#)" list of produce with the lowest detectable levels of pesticides from 2018-2023. This list is based on the USDA's [Pesticides Data Program](#) Annual Summary.

### **Talking Points**

- The mango industry relies on limited use of pesticides to ensure the safety and quality of mangos. The NMB encourages all mango industry members to comply with U.S. regulations regarding pesticide use.
- Malathion is a common insecticide. It is used by home gardeners and city municipalities to control disease-causing insects such as mosquitos and ticks, and nuisance insects such as ants.
- Farmers use malathion to prevent insects like aphids from destroying many crops. In the U.S. malathion has been used since 1956 and the EPA has approved it for use on over 100 produce and commodity items.
  - *If asked about EU-approvals:* This insecticide is not used in the EU but is approved for use in the U.S. and Mexico.
  - *If asked about U.S. vs. Mexico regulatory standards:* The amount of malathion permitted for use under regulatory standards in the U.S. and Mexico are identical.
- USDA research has also shown that mangos have some of the lowest levels of chemical residue of all produce tested in the U.S.

### **Social Media Messaging**

- USDA research has shown that mangos have some of the lowest levels of chemical residue of all produce tested in the United States. In fact, the Environmental Working Group named Mangos to their "Clean 15" of produce in 2018.

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## **Water Quality**

### **Background**

Research has shown that mangos treated with hot water could be susceptible to the internalization of salmonella if they were then cooled with contaminated water. The research highlighted the importance of following proper procedures to ensure the quality and safety of water used to treat mangos.

This points to the importance of ensuring the quality and safety of water used to grow and treat mangos. Hot water treatment for mangos is regulated by the USDA's Animal and Plant Health Inspections Service (APHIS) and includes specifications for using potable water. These regulations are complemented by NMB's "[Mango Postharvest Best Management Practices Manual](#)" and "Mango Industry Food Safety Training Kit," which include specific guidelines for ensuring water quality during hot water treatments.

The FDA has established [requirements for harvest and post-harvest agricultural water](#).

### **Talking Points**

- Mango water quality guidelines for plant health reasons are enforced by USDA and supported by the industry
- Under FSMA, FDA oversees and enforces produce water safety guidelines for human health reasons.
- Providing outstanding-quality mangos that consumers will purchase again and again requires a commitment to safety and quality by each and every member of the mango industry. This includes ensuring that consumers can trust that mangos are a safe, enjoyable fruit that can be shared with family and friends.
- To help continuously improve the safety and quality of mangos, we issued our "Postharvest Best Management Practices Manual," which includes specific information for ensuring water quality.

### **Social Media Messaging**

- The mango industry is committed to delivering safe, nutritious, high-quality products to consumers. We will monitor the situation and work closely with our members to ensure that the mangos you and your family enjoy are picked, packed and stored according to USDA/FDA federal regulations.

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## **Calcium Carbide As a Ripening Agent**

### **Background**

This issue seems to have first appeared online in 2016 when [a study](#) published in the Journal of Analytical Methods reported that:

“Calcium carbide ( $\text{CaC}_2$ ), a carcinogen, is widely used for artificial ripening of mangoes. The usage of  $\text{CaC}_2$  for mango ripening results in serious health issues like neurological disorders, ulcers, hypoxia, memory loss, etc. Identification of artificially ripened mangoes and quantification of  $\text{CaC}_2$  in such fruits help in prevention of related health problems.”

Although the study was suggesting that an electrochemical method, not water, could be used to detect calcium carbide, it was the revelation that calcium carbide was used in the first place that became the predominant online, consumer-facing news. Unfortunately, the study did not specify the country of origin of the mangos, although it is assumed that the study is referring to mangos in India. Ironically, in 2006 India prohibited the use of carbide gas for fruit ripening and banned the sale of fruit ripened with calcium carbide agent in [2011](#).

The [US FDA](#) opened an office in India in 2008 to inspect food facilities among other regulatory activities. In 2019, an [online article](#), “*FDA testing mangos for calcium carbide*” in which an Indian FDA official says that the agency is checking the city marketplaces but has not found any mangoes with calcium carbide residue. It seems odd that the US FDA would have monitored domestic fruit and not fruit for export to the U.S., but no other information from 2019 has been found.

**The Indian National Agency for Food and Drug Administration and Control (NAFDAC) has said consumption of fruits ripened with calcium carbide causes cancer, heart, kidney diseases and liver failure.**

In 2023, a number of related YouTube videos made their way across social media channels. The videos [claim](#) that consumers should put mangos in water to determine if they are ripened naturally or with calcium carbide. The videos claim that if the mango floats it is ripened naturally, and if it sinks, it has been artificially ripened with calcium carbide. At the same time, an NMB member reported that a consumer had contacted him asking if his mangos, sold in a major U.S. retail big box store, were ripened using calcium carbide. NMB added questions to its website [FAQ](#) section to address the issue and began referring to them when appropriate.

**Calcium carbide**, also known as **calcium acetylide**, is a chemical compound with the chemical formula of  $\text{CaC}_2$ . Its main use industrially is in the production of [acetylene](#) and calcium cyanamide.<sup>[3]</sup> Applications of calcium carbide include the manufacture of [acetylene](#) gas, the generation of acetylene in carbide lamps, the manufacture of chemicals for fertilizer, and steelmaking.

When calcium carbide comes in contact with moisture, acetylene gas is produced, the effects of which are similar to ethylene, the one that is naturally used for fruit ripening process.

Calcium carbide is reportedly on EPA’s “Right to Know Hazardous Substance” List, but to date we have not been able to confirm this.

Bottomline: U.S. consumers who love mangos and hear these rumors are concerned that the mangos sold in the U.S. may be ripened using a carcinogenic chemical.

### Talking Points

- Our members are committed to providing nutritious, safe mangos to US consumers.
  - Training and education
  - Follow regulations; collaborate with federal agencies
  - Help consumers understand mangos and how to ripen them
- USDA and FDA oversee the quality and safety of mangos sold in the U.S.
  - All mangos sold in the United States must comply with USDA and FDA food regulations.
    - The USDA and FDA do not allow Calcium carbide to be used to ripen mangoes (Note -we are still trying to find a citation for this statement)
    - Calcium carbide is not allowed as a ripening agent for mangos sold in U.S.
  - FDA and USDA randomly test for unallowed materials before the food reaches consumers (note – we aren’t sure if they specifically test for CC)
- Mangos sold in the United States can be ripened in two ways:
  - Storing the mangos at 68-72 degrees F until soft
    - This can be done at home by putting the mangos on the kitchen counter until they are soft
    - Mangos can also be stored commercially at room temp to assist the ripening process
  - Using ethylene, which is produced naturally by many fruits, including mangos.
    - Consumers can put mangos in a paper bag to trap the ethylene naturally produced by the mangos, and this will speed up the ripening.
    - Commercially, ethylene can be added to ripening rooms to assist the ripening process
  - Floating is NOT a factor in HOW mangos are ripened.

### Social Media Messaging

- If you love mangos and want to know how they are ripened, click here for our FAQ.
- If you want to know why mangos (and other fruits) float in water, click here.

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**What is most important to us? Our goals:**

- U.S. consumers know mangos sold in the U.S. are safe to eat
- U.S. consumers feel confident buying mangos sold in the US

**Consumers want to know:**

1. Are mangos treated with calcium carbide?
2. Is CC carcinogenic?
3. What are the symptoms of calcium carbide poisoning?
  - a. Gastric irritation and mouth ulcers, among other health problems
4. Will washing fruit remove calcium carbide residue?
5. Is ethylene gas harmful?
6. Does ethylene gas wash off?
7. Is ethylene carcinogenic?
8. Do mango producers use acetylene gas to ripen fruit? If so, how is it produced if not using calcium carbide?
9. Are Indian mangos sold in the US?
10. How does USDA/FDA enforce its ban on CC?
11. Why do mangos float?
  - a. If sugar is denser than starches, can consumers conclude that mangos that float have more sugar than those that do not?

**Food Safety Issues**  
[mangofoodsafety.org](http://mangofoodsafety.org)

**[Controlling Points of Potential Food Safety Contamination](#)**

**[Produce Traceability Initiative](#)**

**[Food Safety Ripple Effect](#)**

**[Trade Association, Retailer and Foodservice Partners](#)**



## **Controlling Points of Potential Food Safety Contamination**

In 2012, the FDA and the Canadian Food Inspection Agency (CFIA) issues a consumer alert to not consumer mangos from a single supplier, Agricola Daniella in Sinaloa, Mexico due to concerns about salmonella contamination. This was the first notice of its kind since NMB's establishment in 2005. Prior to NMB's work, there had been only three known incidents in which mangos were associated with a food-borne illness (salmonella). Since 2012, there has been a limited voluntary recall of mangos by one supplier. Media coverage of the recall was limited.

Another potential point of concern is the health and hygiene of employees handling mangos. Employees should be encouraged to practice good hygiene and to follow sanitary practices at work for themselves and their work environment. Other pertinent best practices and regulations for controlling points of contamination include reducing the presence of food-borne contaminants, eliminating pests, training focused on sanitation, ensuring water quality for hot water treatment, optimal storage and shipment procedures, and more.

More recently, taking into consideration evolving food safety knowledge and requirements, NMB has worked with food safety expert Dr. Sergio Nieto-Montenegro of Food Safety Consulting & Training Solutions, LLC, to develop a Food Safety Training Kit. This Kit shares food safety training materials recommended for mango growing farms and packinghouses in the top six exporting countries, and mango warehouses and distribution centers in the United States. The Kit also covers a range of recommendations from on-the-farm practices and employee hygiene to retail handling guidelines. The kit and comprehensive materials are available online at: <http://www.mangofoodsafety.org>.

The National Mango Board (NMB) also facilitates members' awareness and understanding of the [Food Safety Modernization Act](#) (FSMA) and its applicable rules, such as the Produce Rule, the Foreign Supplier Verification Program, and the Traceability Rule. The U.S. Food and Drug Administration (FDA) provides a variety of resources, such as an online Produce Rule [Fact Sheet](#) that includes key requirements, compliance dates, an [FAQ and more](#).

## **Talking Points**

- Providing outstanding quality mangos that consumers will purchase again and again requires a commitment to safety and quality by each and every member of the mango industry. This includes ensuring that consumers can trust that mangos are a high-quality, safe, enjoyable fruit that can be shared with family and friends.
- NMB and its members promote adherence with USDA's Fruits and Vegetables Import Requirements.
- With the publication of its "Mango Industry Food Safety Training Kit," NMB complemented the USDA's safety requirements by detailing steps the mango industry can take to continuously improve the safety of mangos.
- NMB will continue to work with the mango industry to encourage adherence to all U.S. food safety standards and best practices.

*If asked about the previous mango recalls:*

- Providing consumers with safe, quality mangos is our first priority. We were saddened to learn that any consumer may have become ill after eating mangos.
- NMB is committed to helping the mango industry continuously improve food safety best practices. NMB is working with its members and food safety experts to learn from this incident and to update pertinent food safety best practices for the industry.

### Social Media Messaging

- Providing outstanding quality mangos that consumers can enjoy with their families and friends requires a commitment to safety and quality by each and every member of the mango industry. As part of our mission, NMB will continue to work with the mango industry to promote adherence to all U.S. food safety standards and best practices.

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## **Produce Traceability Initiative**

### **Background**

The goal of the Produce Traceability Initiative (PTI) is to protect the consumer through faster and more precise identification of implicated product. PTI is intended for those responsible for implementing traceability in their company's operations and supply chain. This includes fresh produce growers, packers, exporters/importers, and distributors as well as their customers and suppliers. It applies to fresh fruit and vegetables for human consumption at all levels of production and shipping containers, including pallets, cases, and consumer items.

Each traceability partner must be able to identify the direct source (supplier) and direct recipient (customer) of product by tracing the history, application, or location of the product they're handling. Types of traceability include:

- *External Traceability* is the business processes that occur between trading partners and the information/data exchanged to execute traceability.
- *Internal Traceability* is the proprietary data and business processes a company uses within its own span of operations to execute traceability.
- *GS1 Traceability* provides the framework required to support the traceability (business) process. Developed by industry, the standard defines the globally accepted method for uniquely identifying:
  - Trading parties
  - Trading locations (can be any physical location such as a warehouse, packing line, storage facility, receiving dock, or store)
  - The products a company uses or creates
  - The logistics units a company receives or ships
  - Inbound and outbound shipments
- *The GS1 Global Traceability Standard* also defines the essential pieces of information that have to be collected, recorded, and shared to ensure one step up, one step down traceability. The standard is applicable to companies of all size and geography.

The FSMA Traceability Rule applies to [certain foods](#), including all tropical tree fruits such as mangos, papayas and guava. The NMB is developing educational materials and videos to help its members understand and comply with this rule.

### **Talking Points**

- Providing outstanding quality mangos that consumers will purchase again and again requires a commitment to safety and quality by each member of the mango industry. This includes ensuring that consumers can trust that mangos are a safe, enjoyable fruit that can be shared with family and friends.
- As part of its mission, NMB will continue to work with the mango industry to encourage adherence to all U.S. food safety standards and best practices, including the Produce Traceability Rule.
  - NMB does this by providing educational webinar and documents.

### **Social Media Messaging**

- The mango industry is committed to delivering safe products to consumers. We will monitor the situation and work closely with our members to ensure that you can safely enjoy mangos with your family and friends.

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## **Food Safety Ripple Effect**

### **Background**

As a whole, the industry is committed to doing everything possible to eliminate the risk of food-borne illnesses, and to continuously improving its food safety practices.

However, it is possible that the mango industry's reputation could be damaged by a food safety issue that affects another industry or a country where mangos are grown. For example, the 2013 outbreak of *Cyclospora* in the United States led to a lengthy investigation for the source. Investigators' first guidance to consumers advised that *Cyclospora* was typically related to produce imported from Latin America. Subsequently, the outbreak was tied to a salad mix imported from Taylor Farms de Mexico. Outbreaks of *Cyclospora* continue to be an issue with outbreaks in 2014 and 2015 leading to similar investigations and concerns regarding the safety of imported produce. Outbreaks such as these are highly publicized by the media and contribute to consumer perceptions that imported produce may be less safe than other options.

Other potential areas for concern may include:

- Unapproved use of pesticides, fungicides, or other chemicals.
- Pests associated with other tropical fruits (e.g., fruit flies).
- Embargoes of other tropical fruits.

NMB monitors food safety concerns that may tangentially affect the mango industry. When appropriate, the board may proactively determine the extent to which it could be impacted.

### **Talking Points**

- The mango industry is committed to delivering safe, quality product to consumers, and we work with others in the produce industry to do so.
- We will monitor the situation and work closely with our members to ensure consumers can confidently enjoy mangos with their families and friends.

### **Social Media Messaging**

- The mango industry is committed to delivering safe products to consumers. We will monitor the situation and work closely with our members to ensure that you can safely enjoy mangos with your family and friends.

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## **Trade Association, Retailer and Foodservice Partners**

### **Background**

As part of its mission, NMB provides information and resources used to help ensure the quality and safety of mangos from grove to table. This work includes providing educational materials to retailers and foodservice customers as well as working with the trade associations and groups that represent and/or work with these businesses.

In particular, the NMB works with International Fresh Produce Association (IFPA), Fresh Produce Association of the Americas (FPAA), National Restaurant Association (NRA), Food Marketing Institute (FMI), and American Frozen Food Institute (AFFI) to varying degrees. Some information regarding their programs is listed below.

In the wake of numerous high-profile food recalls and in response to legislative and regulatory changes, these organizations and others have developed comprehensive food safety programs or enhanced their programs to better serve their membership with the goal of delivering safe foods to consumers.

[IFPA](#) provides its members with food safety tools and information as well as access to food safety and traceability experts who are available to help develop food safety programs. IFPA also partners with the USDA to provide Produce Inspection Training programs led by USDA experts. The programs are open to produce industry members from grower to retailer.

[FPAA](#), which represents growers based in Mexico, shares the NMB's commitment to food safety and provides its members with information regarding the requirements for complying with all U.S. regulations.

While foodservice food safety requirements vary by state, many states require certification through NRA's [ServSafe](#) program.

[FMI](#) provides retailers and wholesalers with food safety information based on regulatory requirements; tailors programs and training to its members' needs; and supports its members in response to food safety concerns, including food recalls.

[AFFI](#) is a member-driven national trade association that advances the interests of all segments of the frozen food and beverage industry. AFFI works with its members to advance food safety, advocate for frozen and provide resources to boost category performance.

### **Talking Points**

- NMB is committed to delivering the best quality and safest product to our retail and foodservice clients. Through education and information dissemination, we enhance their understanding of safe handling practices.

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**Sustainability Issues**  
<https://mangosustainability.org/>

[\*\*U.S. Supply Chain and Distribution \(Sustainability\)\*\*](#)

[\*\*Food Miles and Importing Tropical Fruits\*\*](#)

[\*\*Environmental Impact of Production Practices\*\*](#)

[\*\*Water Usage\*\*](#)

## **U.S. Supply Chain and Distribution (Sustainability)**

### **Background**

Growing consumer demand for “local” foods and seasonal produce stems from consumer interest in ways to help prevent negative environmental impacts (i.e. food miles) associated with importing foods to the U.S. Consumers, and may also be motivated by a desire to support local producers.

This trend creates concerns for some mango industry members since the vast majority of mangos available in the United States are from imported tropical regions, Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru. In 2019, 66 percent of mangos were imported from Mexico.

There are also consumers interested in purchasing produce authentic to their regions. When appropriate, highlight the tropical nature and grower expertise associated with mangos.

Additionally, NMB’s Sustainability Assessment for the mango industry provides information that can be used to counter concerns about the negative impact of importing mangos and signals the industry’s commitment to addressing these concerns through this work. Additionally, as issues come up that reinforce the mango as an imported product, positive messages should be delivered that highlight its tropical origins and expertise in the growing regions.

In 2019 the [NMB launched the Mango Sustainability Program](http://www.mangosustainability.org). This initiative engages mango producers and packers in reducing their environmental and social footprint with easy-to-implement sustainability practices and was designed to ensure that participants have a positive impact on both the people and the environment in their communities. The program and comprehensive materials are available online at: <http://www.mangosustainability.org>.

### **Talking Points**

- Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates, producing the uniquely sweet flavor the world has come to know and love. This means the majority of mangos consumed in the U.S. are imported with care from such countries as Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru.
  - This is similar to products such as bananas, coffee, and other foods that can only grow and thrive in certain regions.
- The mango industry uses the most efficient means to distribute fresh mango to retailers and restaurants across the country. Not only does this reduce transportation time, but it helps ensure mangos are delivered when they’re at their peak for flavor and quality.
  - Mangos are most frequently shipped to the United States on trucks and boats. Once in the U.S., they are shipped by truck to customers.
  - Thanks to improvements in the trucking industry, these road miles are more fuel-efficient than ever.
- Based on the findings of NMB’s Sustainability Assessment, it is likely that the mango industry could have a [positive impact on carbon dioxide levels](#) due to mango groves that contribute to carbon sequestration.

The assessment was conducted in partnership with Common Fields, a sustainability consulting service.

### Social Media Messaging

- The mango industry is committed to delivering safe products to consumers. We will monitor the situation and work closely with our members to ensure that you can safely enjoy mangos with your family and friends.

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## **Food Miles and Importing Tropical Fruits**

### **Background**

Six varieties of mango are most widely available in the U.S. and are imported from tropical regions, including Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru. Exporting mango countries harvest their mango crops at different times of the year, allowing for year-round availability in the United States. The most commonly available varieties of mangos include Ataulfo, Francis, Haden, Keitt, Kent, and Tommy Atkins.

In 2019, more than 60 percent of mangos were imported from Mexico.

While there is an increasing consumer demand for “local” foods and concern about the environmental impact of importing foods, mango production in the continental United States (e.g., Florida and California) is very limited and insufficient to meet growing consumer demand.

Simultaneously, demand is growing for mangos and consumer research indicates that country-of-origin and variety are not yet top-of-mind concerns for consumers when choosing mangos. Consumers are more focused on understanding how to choose, prepare, and enjoy mangos.

This fact allows the NMB and others to focus on the eating experience as a purchase motivator and education about selecting and preparing mangos. As issues come up that reinforce the mango as an imported product, positive messages should be delivered that highlight its tropical origins and expertise in the growing regions.

### **Talking Points**

- Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates, producing the uniquely sweet flavor the world has come to know and love. This means the majority of mangos consumed in the U.S. are imported with care from such countries as Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru.
  - This is similar to other products such as bananas, coffee, and other foods that can only grow and thrive in certain regions.
- Based on the findings of NMB’s Sustainability Assessment, it is likely that the mango industry could have a positive impact on carbon dioxide levels due to mango groves that contribute to carbon sequestration.
  - The assessment was conducted in partnership with Common Fields, a sustainability consulting service.

### **Contacts**

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## **Environmental Impact of Production Practices**

### **Background**

The potentially negative impact of farming practices on the environment is an issue that garners media coverage and generates consumer concern. Particular points of concern for the mango industry could be related to the ways in which transportation, fertilizers and other production practices may contribute to carbon emissions.

NMB's [Sustainability Assessment](#) for the mango industry is a beginning point to help respond to specific concerns or criticisms. In particular, the mango industry's willingness to undertake this survey and to consider ways the industry could minimize or neutralize its impact on the environment are positive messages the mango industry should highlight where appropriate.

A notable finding of the sustainability assessment to highlight is the potential for industries like mangos, which rely on large groves of trees, to have positive impact on carbon emissions because groves of trees sequester and convert carbon dioxide. While mango-specific research is preliminary, this is promising data.

In 2019 the NMB launched the Mango Sustainability Program. This initiative engages mango producers and packers in reducing their environmental and social footprint with easy-to-implement sustainability practices and was designed to ensure that participants have a positive impact on both the people and the environment. The program and comprehensive materials are available online at: <http://www.mangosustainability.org>.

### **Talking Points**

- Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates, producing the uniquely sweet flavor the world has come to know and love. This means the majority of mangos consumed in the U.S. are imported with care from such countries as Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru.
  - This is similar to other products such as bananas, coffee, and other foods that can only grow and thrive in certain regions.
- Based on the findings of the NMB's Sustainability Assessment, it is likely that the mango industry could have a positive impact on carbon dioxide levels due to mango groves that contribute to carbon sequestration.
  - The assessment was conducted in partnership with Common Fields, a sustainability consulting service.

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## **Water Usage**

### **Background**

Water usage was identified as an area of potential concern in the NMB's "[Sustainability Assessment for the Mango Industry](#)."

In particular, the assessment found that mangos appear to be at the high end of water usage in comparison to other produce; flood irrigation was identified as a major source of water usage. However, the research also notes that, in some cases, irrigation practices are managed by government authorities and mango growers may not have autonomy to consider options such as micro spray or micro drip irrigation to reduce water use.

While further research is needed to draw more conclusive findings and specifics, it should be noted that NMB's Sustainability Assessment signals the industry's commitment to addressing concerns such as these.

In 2019 the NMB launched the [Mango Sustainability Program](#). This initiative engages mango producers and packers in reducing their environmental and social footprint with easy-to-implement sustainability practices and was designed to ensure that participants have a positive impact on both the people and the environment. The program and comprehensive materials are available online at: <http://www.mangosustainability.org>.

### **Talking Points**

- NMB commissioned the Sustainability Assessment with the goal of better understanding how the mango industry can help reduce its impact on the environment.
  - The assessment was conducted in partnership with Common Fields, a sustainability consulting service.
- While the assessment found that mango production may use more water on average than other produce, it also identified alternative production practices that could reduce water usage.
- The assessment determined that micro spray irrigation could use 100 times less water than flood irrigation, and the NMB has recommended that – where possible – growers consider this option.
  - It should be noted, however, that some mango growers' options are limited because irrigation is managed by government authorities.

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## Imported and Domestic Mango Issues

[Mango Varieties Available in the United States](#)

[U.S. Customs Border and Protection Seizures](#)

[Labor and Workforce Practices](#)



## **Mango Varieties Available in the United States**

### **Background**

Six varieties of mango are most widely available in the United States and are imported from tropical regions, including Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru. Exporting mango countries harvest their mango crops at different times of the year, allowing for year-round availability in the United States. The most commonly available varieties of mangos include Ataulfo, Francis, Haden, Keitt, Kent, and Tommy Atkins.

In 2019, 65 percent of mangos consumed in the United States were imported from Mexico. Less than 1% of mangos are grown in the United States and its territories (e.g., Hawaii, Florida and Southern California, Puerto Rico), but the supply is very limited and insufficient to meet growing consumer demand. Additionally, the growing requirements for quality mangos make it highly unlikely that the U.S. mango industry could expand to meet consumer demand in the future.

### **Talking Points**

- Mangos are grown in tropical regions where they thrive in sunny, consistently warm climates, producing the uniquely sweet flavor the world has come to know and love. This means the majority of mangos consumed in the U.S. are imported with care from such countries as Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru.
  - This is similar to other products such as bananas, coffee, and other foods that can only grow and thrive in certain regions.
- There are some mangos grown in the United States (e.g., Florida and California), but the supply is insufficient to meet consumer demand.
  - Florida growers contribute to the mango industry overall by developing new mango varieties, such as the Tommy Atkins, that thrive best in more tropical regions. However, the U.S. climate is not conducive to any type of significant expansion of mango groves.

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## **Border Closures, Embargoes and Import Taxes**

### **Background**

Because the vast majority of mangos sold in the United States are imported from Brazil, Ecuador, Guatemala, Haiti, Mexico, and Peru. Like all imported produce any delays at the border could significantly impact product quality, and U.S. supply. Similarly, taxes levied on all goods imported to the United States could impact the price customers and consumers pay for mangos and other items.

Potential situations that could negatively impact portions or the entire industry include:

- Embargo on imports of produce (non-mango specific) from a mango-producing country.
- Closure of a major port or border crossing (e.g., Nogales, Philadelphia, etc.) due to circumstances unrelated to mangos.
- Embargo on imports of mangos in particular from some or all mango-producing countries (e.g., fruit flies or unapproved chemicals found in mango shipment).
- Taxes levied on or proposed for imports of produce (non-mango specific) from one or more mango-producing countries.

While NMB cannot lobby or advocate on behalf of its industry members, the board can facilitate dialogue between its members and the appropriate agency contacts and/or others within the industry (e.g., International Fresh Produce Association) with the goal of resuming mango shipments.

## **Talking Points**

### *Border Closure or Embargo*

- The vast majority of mangos sold in the United States are imported. This border closure/embargo has the potential to significantly reduce mango availability in the United States.
- We are working with our members and the appropriate agency contacts to understand and/or address the concerns that led to this border closure/embargo.

### *Import Taxes*

- As an agriculture promotion board established by the USDA, the NMB does not advocate or lobby for policies or regulations on behalf of the mango industry.
- While an import tax may have an impact on the price consumers pay for mangos, NMB's goal is and shall remain focused on increasing consumer demand for fresh mango in the United States.

### *Fruit Flies in Mangos*

- As an industry, it is our goal to help prevent any damage to crops due to pests. We are working with the USDA's Animal Plant Health and Inspections Services on behalf of our members to ensure that these pests are contained and do not damage U.S.-grown crops.
- We will also work with our members to reiterate the importance of adhering to all of APHIS's regulations, including pest management, for mangos. This is supplemented by the pest management guidance in our "[Mango Postharvest Best Management Practices Manual](#)" that is available to all industry members.

### *Unapproved Chemicals Found in Mangos*

- The mango industry relies on the limited use of pesticides to help ensure the safety and quality of mangos. And NMB encourages all members of the mango industry to comply with all U.S. regulations regarding the use of pesticides, including ensuring that only approved pesticides are used for mangos imported into the United States.

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## **U.S. Customs Border and Protection Seizures**

### **Background**

When the media reports on forfeiture of mangos, we want to remind the industry about the purpose of the National Mango Board.

### **Talking Points**

- The National Mango Board and its mango industry members continue to focus on growing and distribution practices that meet and exceed U.S. Department of Agriculture standards while improving quality at every possible junction. That will continue to be our focus.

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## **Labor and Workforce Practices**

### **Background**

Labor practices in other countries become an issue when consumers are made aware of specific instances of poor labor conditions. Fair trade and labor practices are an issue of interest to particular segments of consumers, but it is not necessarily a top-of-mind concern for all consumers.

To avoid negative media coverage or consumer perceptions about the mango industry, it is important that all members of the industry be aware of the concern and implement practices that show consideration of the labor force.

While NMB is not likely to become involved in labor issues, it will monitor the issue, provide the industry's general position on labor practices and facilitate discussions as appropriate.

### **Talking Points**

- NMB represents growers, exporters, and handlers from around the globe, and while each country has specific standards for treatment of human resources, we support the fair treatment of all industry-related labor.

#### *Allegations of labor practice violations within mango industry*

- While we are not in a position to comment on the specifics of these allegations, we will cooperate with the officials investigating these allegations.
- We support the fair treatment of all employees within our industry.
  - NMB provides training and education materials to help its members meet SEDEX and SMETA social responsibility and ethical trading audits.  
<https://www.mangofoodsafety.org/SMETA/>

### **Social Media Messaging**

- We represent growers, exporters, and handlers from around the world, and while each country has specific standards for treatment of human resources, we support the fair treatment of all industry-related labor.

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## Consumer Concerns

[Mango Quality](#)

[Supply and Availability in the United States \(Consumer Demand\)](#)

[Allergic Reaction to Mango Peel or Skin](#)

[Phytophotodermatitis](#)

[Consumer Handling](#)

[PETA and Animal Rights Issues](#)

## **Mango Quality**

### **Background**

As with any fresh produce, the quality of mangos is subject to factors that are both controllable and uncontrollable. Controllable factors include growing practices such as field preparation, pest management and irrigation. They also include harvest timing and techniques as well as post-harvest handling, shipping and storage. Then, there are those uncontrollable factors, such as Mother Nature and supply chain management post farmgate, such as retail/foodservice storage and handling factors.

Consumer research identifies an overall satisfaction among mango purchasers with the quality of the fruit. According to the monthly consumer survey (May 2018 – November 2020), 79 percent of mango buyers have been satisfied with the quality of mangos they have purchased.

With the goal of continuously improving the quality of mangos imported to the U.S., the NMB published its “[Mango Postharvest Best Management Practices Manual](#),” which gives guidance on improving the production and delivery of mangos at each point of the mango’s grove to consumer journey. The NMB also provides retailers, foodservice, and consumers with information to ensure mango quality, including information about how to select and prepare mangos.

### **Talking Points**

- As one of the world’s most popular fruits, the mango is loved for its bold, tropical flavor. The mango industry in the United States is committed to continuously improving its distribution practices to make sure consumers are able to enjoy mangos at their peak of quality and flavor.
- While mangos are becoming more popular with American consumers, they are the world’s most popular fruit. Easy steps on how to select, cut and store a mango are available on [mango.org](https://mango.org).

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## **Supply and Availability in the United States (Consumer Demand)**

### **Background**

Supply issues range from scarcity to excess supply.

From an industry perspective, a predictable mango supply is important for a variety of reasons. For example, retail promotions for mangos rely on having a sufficient supply of mangos to meet the resulting consumer demand. Additionally, the industry can be negatively impacted by production that exceeds forecasts as that can depress mango prices.

Because the mangos are grown in tropical regions throughout the globe, there is year-round availability. As with any fresh produce, there are volume fluctuations and NMB works with growers to project volume distribution and encourage retailers to feature the popular fruit on a year-round basis.

### **Talking Points**

- The NMB assists the industry in forecasting and communicating with retailers, encouraging the year-round display of mangos and informing them when an influx means more display opportunities.
- The NMB encourages consumers to enjoy mangos year-round and to ask their retailer or produce managers to keep a supply of mangos available at all times.
- Every seven days, the NMB updates and issues the [Mango Crop Report, available in English and Spanish](#), with information from the countries that are currently shipping mangos, will begin shipping soon, or have recently ended shipment to the United States.
  - The Mango Crop Report includes information about volume shipped to and arrived in the United States; varieties shipped; recent pricing information; and more.
- The Mango Crop Report and other seasonal variety information are available on <https://www.mango.org/professionals/industry/varieties-availability/>

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## **Allergic Reaction to Mango Peel or Skin**

### **Background**

Urushiol is a type of oil found on the skin and in the stems of mangos that in some cases may cause an allergic reaction in some people. Cashew and pistachio plants also contain urushiol. The most common type of reaction is an itchy skin condition called contact dermatitis. Urushiol can also cause redness or minor blistering; reactions usually occur within 12 hours to 48 hours.

Mild allergic reactions to urushiol in the skin of mangos can typically be treated with topical steroid creams and/or oral antihistamines prescribed by a dermatologist or physician. More severe reactions may need to be treated with oral or injectable corticosteroids, antibiotics, or other anti-inflammatory and immunologic agents.

*This information is for background only; we do not recommend using it proactively in response to inquiries.* Urushiol is an oil similar to the sap in plants like poison ivy, poison oak and poison sumac. Individuals allergic to latex, which is derived from tree sap, may also experience an allergic reaction to mangos.

Source: American Academy of Dermatology

Other sources of information: <https://www.verywellhealth.com/mango-allergy-82833>

### **Talking Points**

- Consumers who love mangos but are concerned about potential allergic reactions to oil on the skin, may want to try fresh cut mango that has already been peeled and cut.
- Fresh cut mango can be found in the produce section of many retail outlets.
- Another option is to have a friend or family member wash, peel, and cut fresh mangos.
- As with any other medical condition, consumers with food or skin allergies should consult with their physician regarding concerns they may have.

### **Social Media Messaging**

- If you love mangos but are concerned about a potential allergic reaction to the oil on the mango's skin, you may want to try fresh cut mango that is already peeled. You can find fresh cut mango in the produce. As with any medical condition, you should consult with your physician regarding food allergy concerns.

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## **Phytophotodermatitis**

### **Background**

Phytophotodermatitis is a skin condition that can cause some people to have a reaction to certain types of fruits and plants. The reaction occurs only when the skin has been exposed to certain fruits or plants, including lemons, limes, and even mangos, and the affected area is exposed to sunlight (ultraviolet light).

In particular, U.S. media has reported skin reactions when people, especially chefs, handle citrus fruit in large quantities, as well as among people who go into the sun after handling citrus fruit. In 2016, there was limited consumer media coverage of a young girl who had a skin reaction after mango juice dripped on her skin that was then exposed to sunlight.

The skin reaction caused by phytophotodermatitis can be prevented by washing the affected area of skin (e.g., hands, face, etc.) with soap and water, especially when outdoors or near other sources of ultraviolet light.

Source: Mayo Clinic News Network – [Sun-related Skin Condition Triggered by Chemicals in Certain Plants, Fruits](#)

### **Talking Points**

- Consumers who love mangos can take some simple steps to help prevent a reaction to the fruit juice.
- After cutting a mango or other fruits like limes and lemons, be sure to wash your hands with soap and water to remove the juice from your skin. You should also wash any other skin where juice may drip while enjoying your mango.
  - This is especially important if you plan to spend time out in the sun, which can exacerbate a potential reaction.
- If you'll be cutting large quantities of fruits like mangos, limes, or lemons, consider wearing gloves.
- As with any other medical condition, consumers should consult with their physician regarding concerns they may have.

### **Social Media Messaging**

- If you love mangos or other fruits like limes and lemons, but are concerned about having a reaction, be sure to wash your hands with soap and water to remove the juice from your skin. Be sure to wash any other skin where juice might drip, too. As with any other medical condition, you also should consult with your physician regarding concerns you may have.

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## **Consumer Handling**

### **Background**

As with any fresh product, consumers can influence the quality and safety of mangos once purchased at retail.

Storage and preparation are key to the quality of mangos. The NMB's website, [www.mango.org](http://www.mango.org), features several videos and other materials on the best way to select, store, and serve mangos. This information is also featured in a variety of other materials provided by the NMB, including consumer, retailer and point-of-purchase materials.

As with any food product, consumers should always follow general food safety practices such as sanitizing knives, cutting boards, counters, and other kitchen tools that may come into contact with mangos or other foods.

More information about consumer food handling and safety practices are available at [www.fightbac.org](http://www.fightbac.org), which is supported by The Partnership for Food Safety Education. The program is designed to educate consumers about reducing their risk of food-borne illnesses.

### **Talking Points**

- As with all fruit and vegetables, mangos should be washed before they're enjoyed, and both the knife and cutting board must be sanitized before use.
- Consumers can find more information about choosing, storing, and preparing mangos at [mango.org](http://mango.org).
- The mango industry must comply with all U.S. regulations for delivering safe quality fruit to grocery stores. Additionally, NMB has issued a [best practices guide](#) and a [food safety training kit](#) to help its industry members continuously improve their work in bringing mangos to American consumers.

### **Contacts**

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## PETA and Animal Rights Issues

### Background

In 2020, People for the Ethical Treatment of Animals (PETA) began reaching out to commodity boards, including the NMB, regarding the use of animals in research. The NMB has not involved animals in research studies since 2016 and does not have plans to include animals in any upcoming testing.

### General Guidance

Should a reporter or PETA representative reach out for comment on the above issue, all inbound inquiries should be reported to Executive Director Ramón Ojeda as soon as possible. He can be best reached at **T: 407-629-7318 x102** or [rojeda@mango.org](mailto:rojeda@mango.org).

### For email queries:

If the request is sent via email, it is best practice to refrain from responding upon receipt and instead immediately forward the request to Manuel.

For telephone calls:

If the request comes over the phone, it is best to answer the call and explain to the reporter that you are unable to speak at that time, but you will get back to them with additional information as soon as you are able. Keep your response concise, and do not get defensive or dive into the issue with the inquiring party, no matter how persistent.

NOTE: It is best to refrain from stating, “no comment,” as that language can be attributed to the organization in subsequent media coverage. Below are some sample statements you could use to respond to inbound inquiries over the phone:

*“Hello, I am sorry I’m not able to talk right now. I will get back to you with additional details as soon as I am able.”*

*“Thank you for your call. I or someone from my team can help. Unfortunately, I have a conflict at the moment and will have to get back to you shortly.”*

Once you have responded to the inquiry and reported the request to National Mango Board leadership, the following talking points will be used by Executive Director Ramón Ojeda and the Communications team to further respond to any inbound requests.

### Talking Points

- The National Mango Board is not funding any research studies that involve animals. We have not done so since 2015 and have no plans to do so in the future.

### Social Media Messaging

The following messages can be used to amplify the National Mango Board’s dedication to animal safety across its social channels, should leadership deem necessary.

- **Twitter copy:** *“The National Mango Board is committed to maintaining the highest standard of ethics and animal safety. We have not funded any research studies involving animals in over six years and have no plans to do so in the future.”* [220 characters]

- **Instagram caption:** *“The National Mango Board is committed to maintaining the highest standard of ethics and animal safety. We have not funded any research studies involving animals in over six years and have no plans to do so in the future. To ensure our partners adhere to these standards, all third-party researchers who receive NMB grants are required to follow a science-based, ethical approach, which does not involve testing on animals.”*

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<b><u>U.S. Food &amp; Drug Administration</u></b> Note: In the event of an issue that may require FDA involvement, NMB's USDA contacts and the NMB executive director will help identify the correct FDA contact as the FDA contact may vary due to the agency's structure.		



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