Tea Association of the U.S.A. Inc.

Establishing Tolerances for the Tea Industry: A Collaborative Approach

Peter F. Goggi – President

MRL Harmonization Workshop

May 2018

Tea Association of the U.S.A. Inc.

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Today's Agenda

1. USTA
2. Tea Market in U.S.
3. Crop Chemicals Situation
4. Networking
5. USTA as Registrant
6. Future
7. Q & A

Tea Association of the U.S.A. Inc.

Tea Association of the USA, Inc.

Tea Association -

Formed in 1899 to protect the Tea Industry in the USA from harm
For over 119 years it has defended the industry

Tea Council -

Formed in 1950 to Generically Promote Tea
Since 1991 actively promoted Tea & Health

Specialty Tea Institute –

Established Tea Education Arm in 2002, which has become an Industry Standard

Tea Association of the U.S.A. Inc.

Tea Association of the USA, Inc.

Vision

To enable sustainable growth of the US Tea Market as a whole while guiding our membership through an ever changing external environment.

Mission

The Tea Association of the USA is the recognized independent authority on Tea, acting as the official voice for its members on issues related to the tea industry.

Values

Our Core Values are to be ethical, knowledgeable, collaborative and forward looking in all our activities.

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2016 - 2020 Strategy

Regulatory	Ensure the Industry is made fully aware of applicable U.S., EU, etc., Regulations and their impact .
Guidelines	Propose and implement Standards for the Tea Industry in areas not governed under current U.S. Regulations, as well as in white spaces created by new products, forms and consumer trends.
Membership	Drive Association, STI and Council to be an invaluable resource to its members. Ensure Financial Viability of the Tea Association by maximizing membership.
Education	Be the premier choice for education by those seeking to learn about tea. Be the recognized source of tea knowledge for those in the Specialty Tea space.
Communication	Enhance communication to all members by leveraging technology, industry networks, membership collaborations and global industry experts. Ensure Tea & Health Messaging remains focused, rooted in science and undiluted.
Talent & Staffing	Have the right people with the right skills in place to support the Association. Leverage the expertise of the Association's Membership to drive tea.

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Growth of the Tea Market in U.S. Dollars

1990 $ Value by Type

- Traditional $ 0.87 Billion
- RTD 0.20 "
- Food Service 0.50 "
- Special 0.27 "
- Total **$1.84 Billion**

2017 $ Value by Type (Est)

- Traditional $ 2.58 Billion
- RTD 6.00 "
- Food Service 1.50 "
- Special 2.50 "
- Total **$12.50 Billion**

❖ **Green $20 Million**

❖ **Green $1.65 Billion**

- Tea continues to grow in both dollars and volume across all categories and types. Key trends are:
  - Health & Wellness
  - "Naturalness"
  - Variety and Availability
  - Transparency of Source
  - Sustainability across the Supply Chain
- Green Tea's growth has slowed after years of double digit advances

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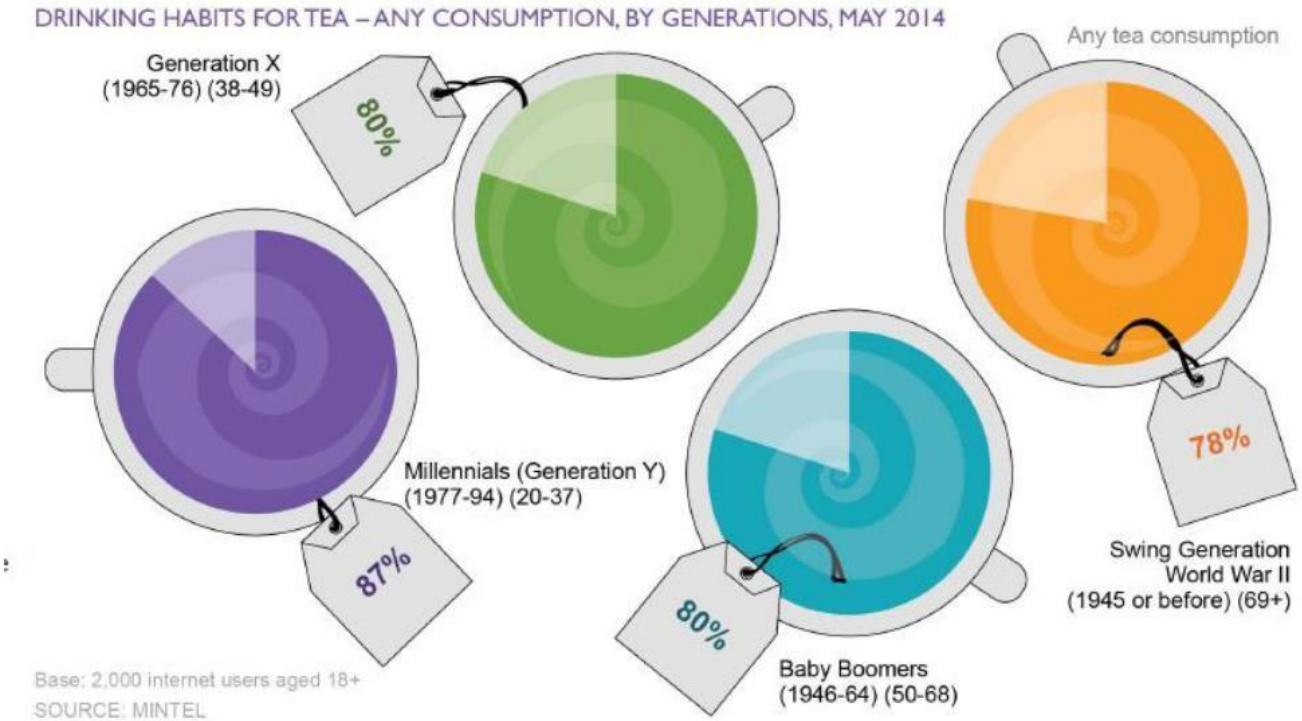
Tea is a popular beverage for the majority of consumers

- Approximately four in five of all consumers drink tea, with Millennials being the most likely
- Due to the large number of consumers across generations, there is an opportunity to target many different markets and avenues



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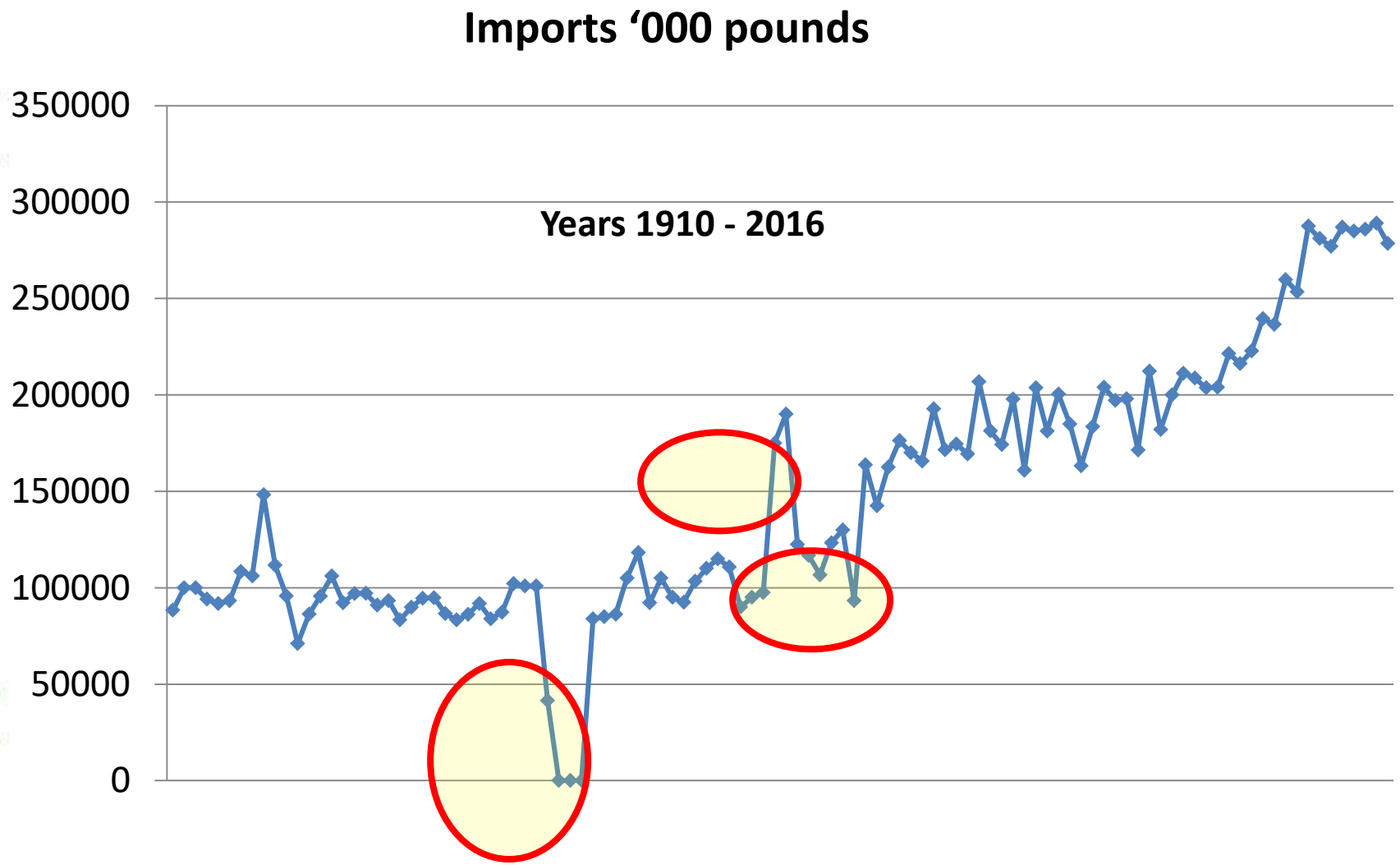
Total Tea Import History



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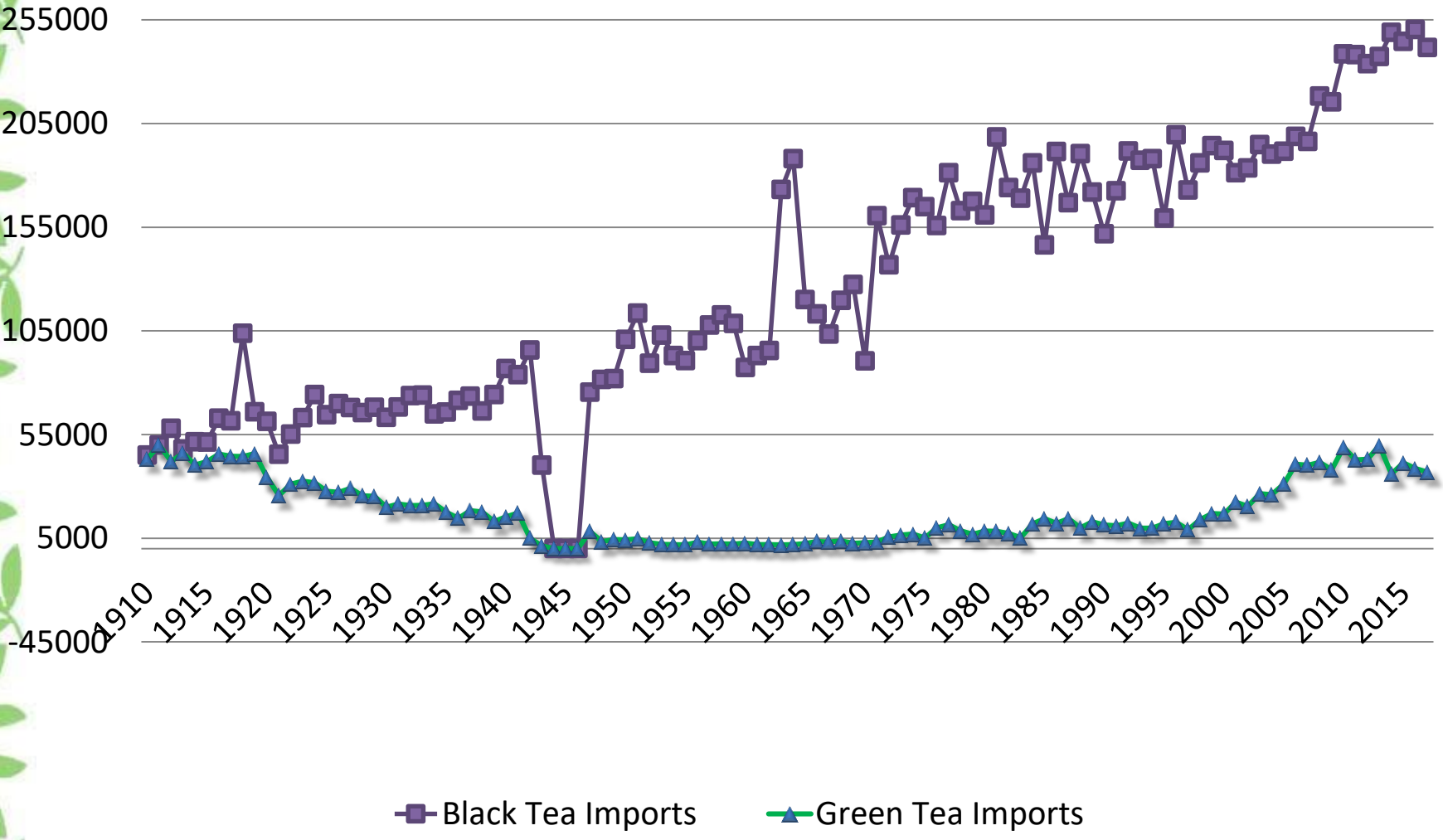
Total Tea Import History



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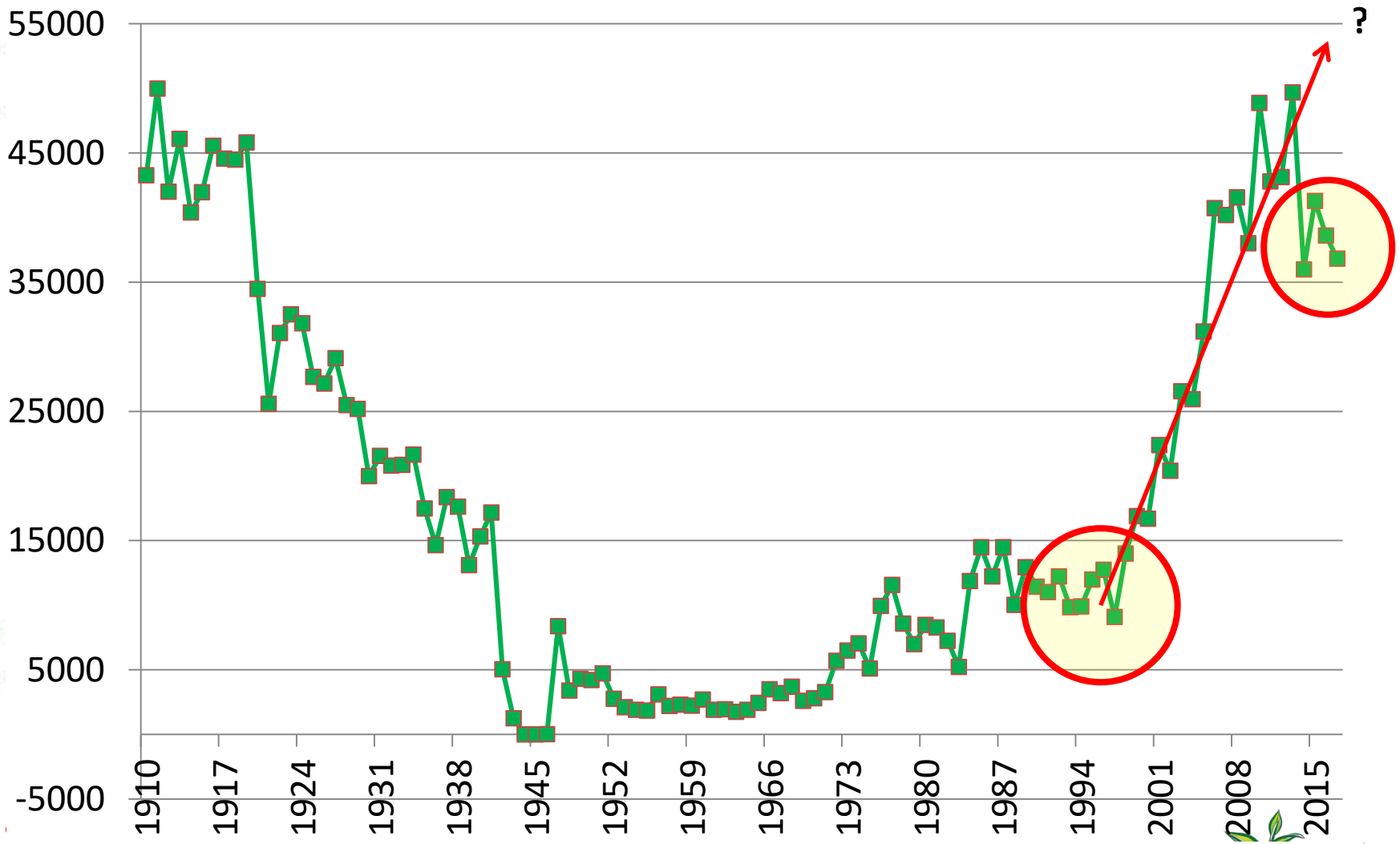
Green Tea Imports: ‘000 lbs



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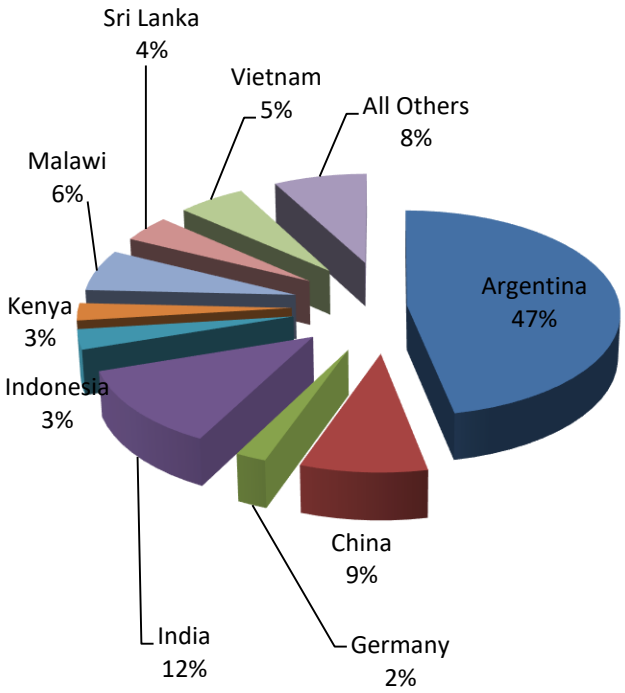
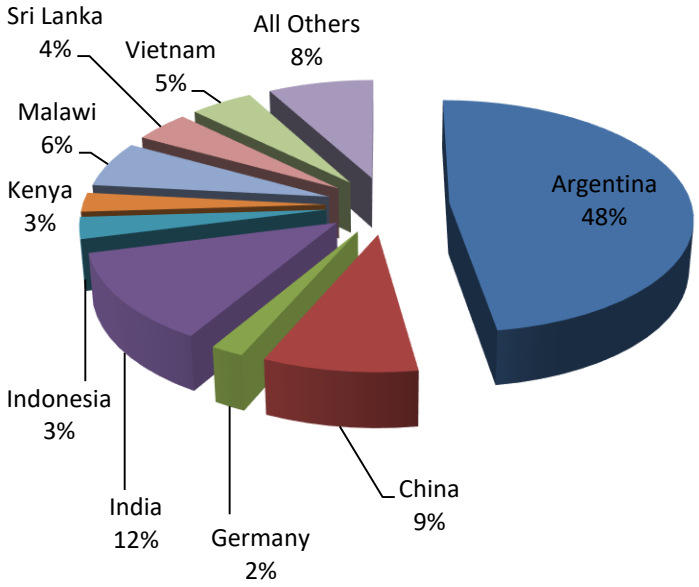
Current Facts – Black Tea

% Average Total Black Tea Imports 2014-2016



% Average Total Black Tea Imports 2015-2017



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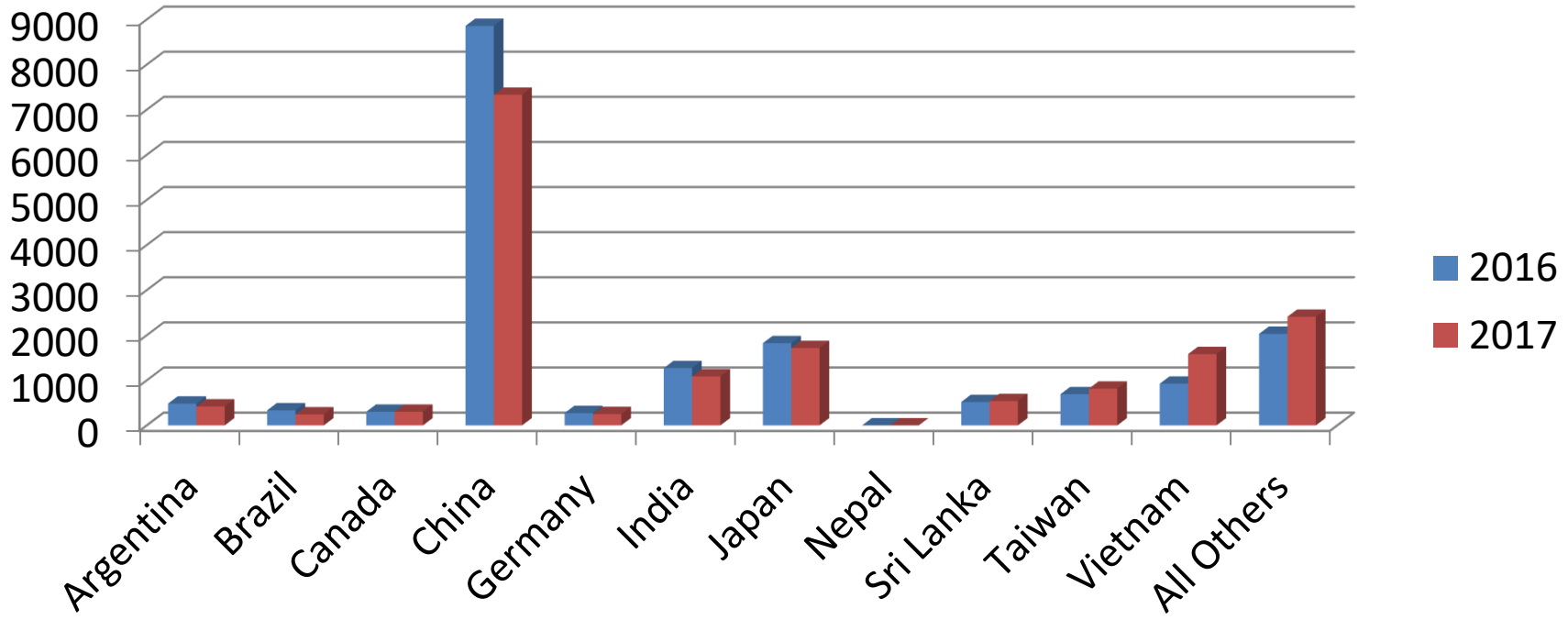
Current Facts – Green Tea



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Pesticide Issue - Background

- **2008 - Few MRL tolerances established for tea**
  - **Only 3 in the USA**
    - Over 99% of the tea consumed in the USA is imported
    - Repeal of the Tea Importation Act of 1897, March 1996
    - Tea was imported under the authority of the U.S. Tea Examiner
    - Organoleptic Evaluation only
    - No MRL's required
- **2008 - Multiple containers of tea detained**
  - Levels of lead and chemical residue
  - 30 Containers in which USTA was asked to intervene
  - Number escalated to 40
  - Importation of tea came to virtual standstill
- Detection
  - 3 chemicals were detected:
    - ƛ-cyhalothrin
    - Bifenthrin
    - Fenvalerate
- The Association commissioned a scientific study demonstrating that the 3 pesticides posed zero risk to human health

Immediate Penalties Imposed

- FDA rejected the 30 containers of tea that had been inspected
  - FDA rejected based it being a matter of law not public safety
- FDA released the 10 containers that had not yet been inspected

- Agreement Reached with the FDA
  - FDA officials agreed to use enforcement discretion provided we put forth good faith efforts to fix the problems
  - Our legal bill for 2008 exceeded $80,000
- Worked with FDA/EPA and created relationship with IR-4
  - Successful registration of multiple Pesticides

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External Pressures

Media & Government

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Media & Government

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Media & Consumers

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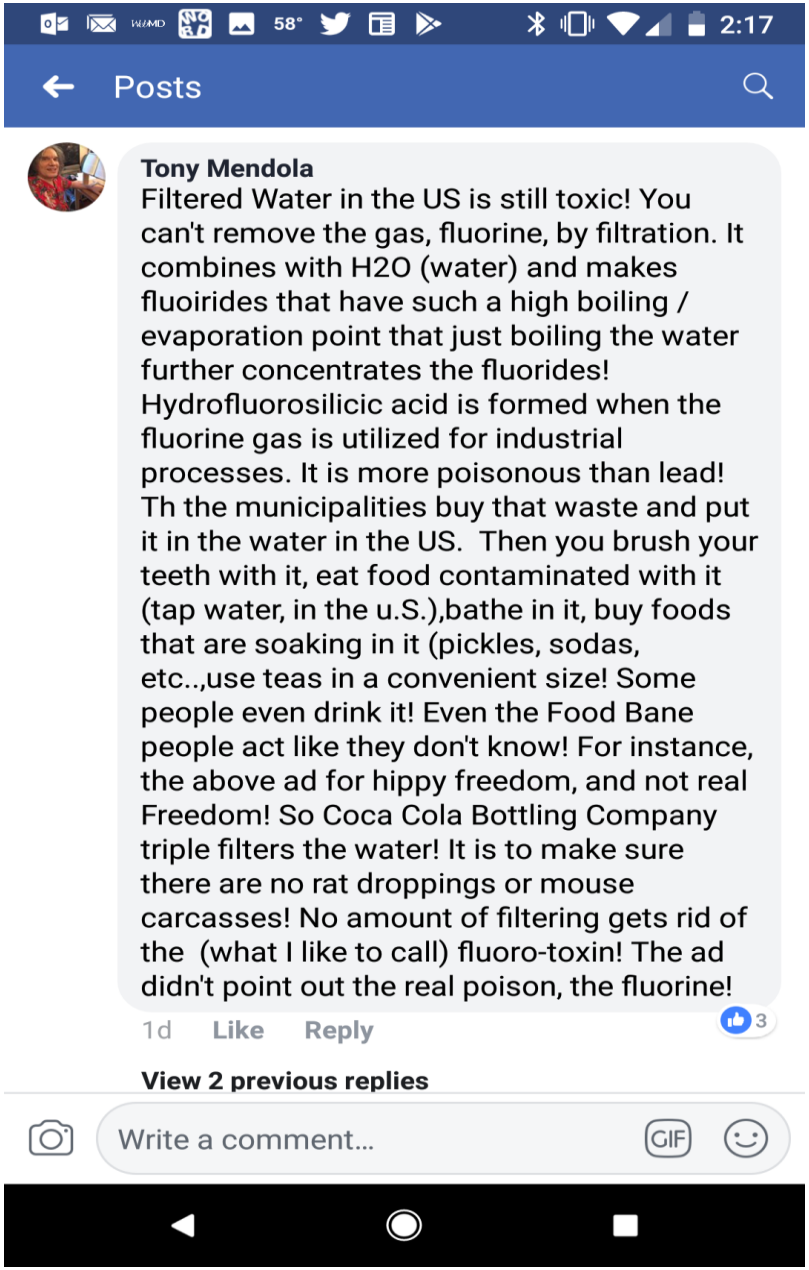
Media & Consumers



Diana S. Jones
And isn't citric acid something like a gmo mold and not derived from citrus??

11h Like Reply

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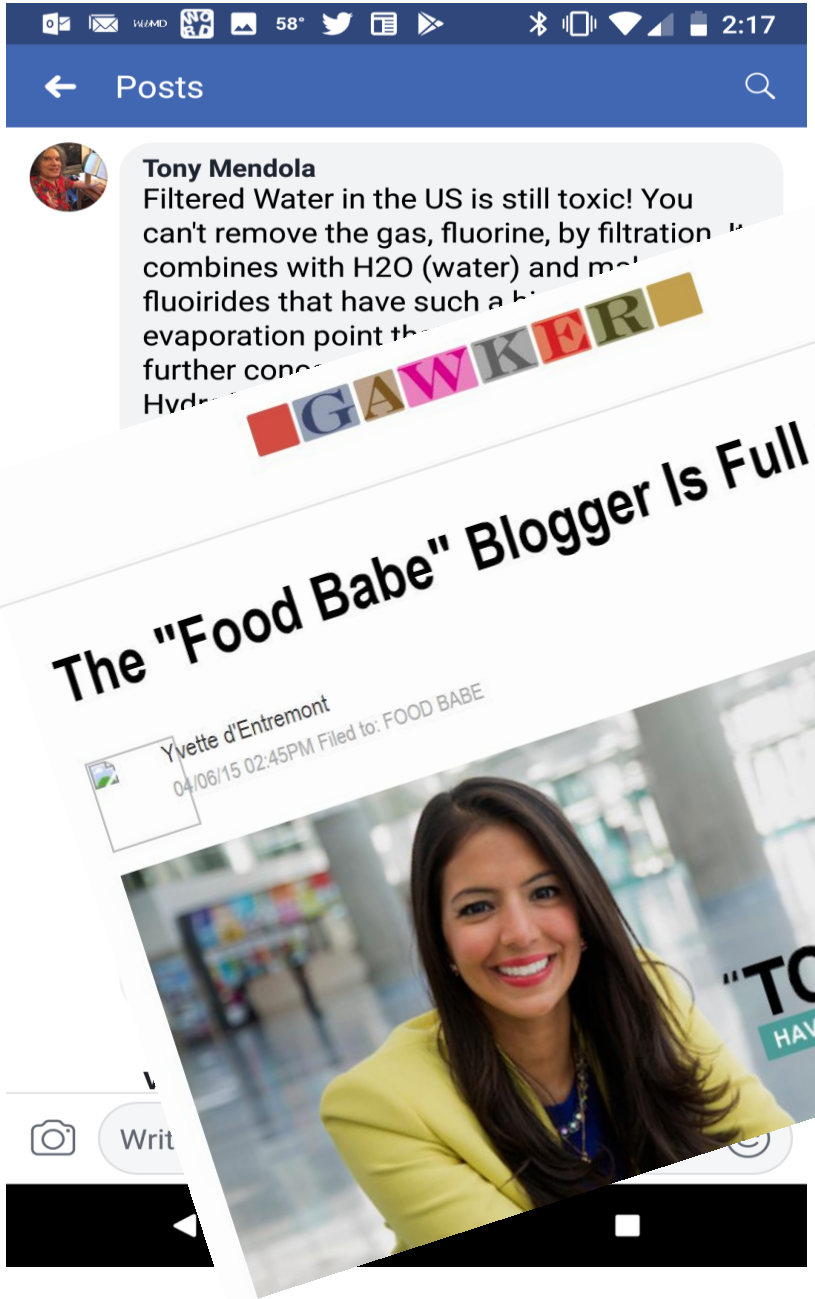
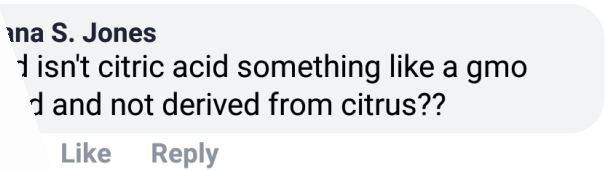
Media & Consumers





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Actions:

- Good Faith Efforts Agreement with FDA
- IR-4 Engagement
- EPA Engagement/Minor Crop Activities
- Industry Wide Meeting in March of 2012
- Key Actions:
  - Formation of Pesticide Steering Group
  - Formation of Work Stream Driven Sub-Committees

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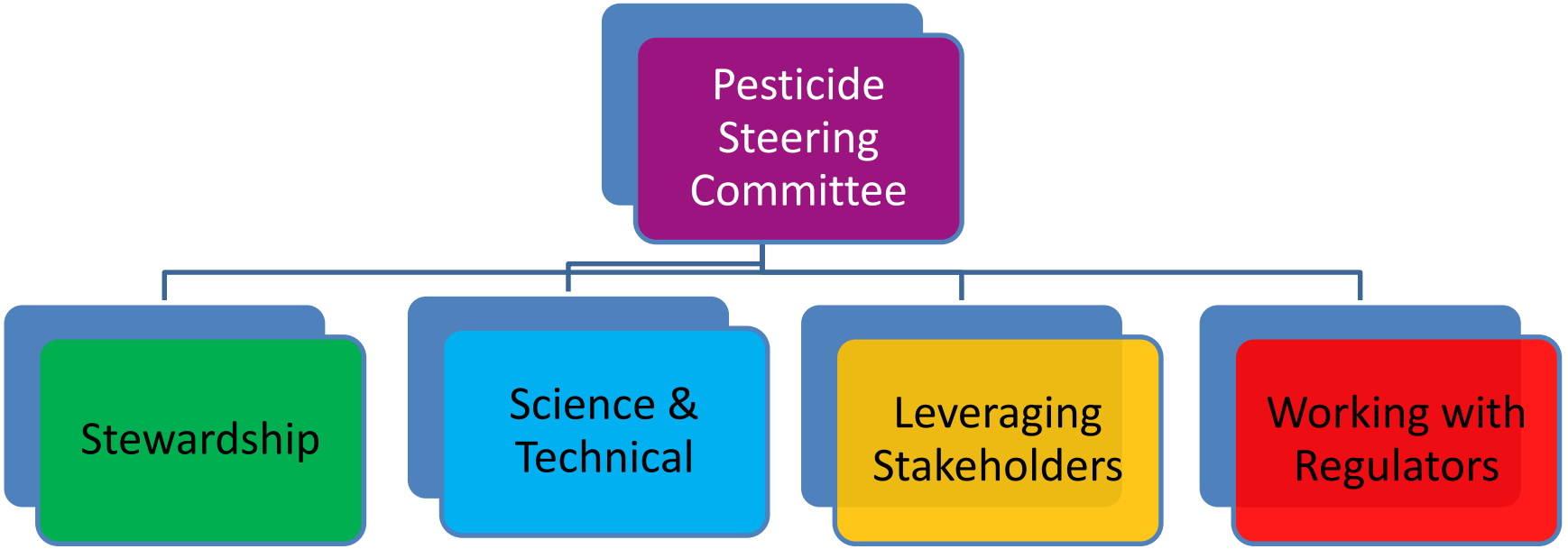
Agreed Structure



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Pre-Meeting Proposed Actions

Harmonization

(Cross Acceptance of MRL's and testing Methodologies)

- How
  - Urge Regulatory Bodies to utilize Codex Standards
  - Sharing Risk Assessment/Test Data
  - Join with other organizations, e.g., ETC, Producer Tea Associations
  - Open relationship with regulatory bodies:
    - Allow for cross product usage if MRL"s established for other like products (e.g., Asparagus)
    - Sharing of data packages
    - Leverage fact that Codex MRL's are now adopted by Europe

- Understand that Regulators need science based data to set MRL's to avoid litigation

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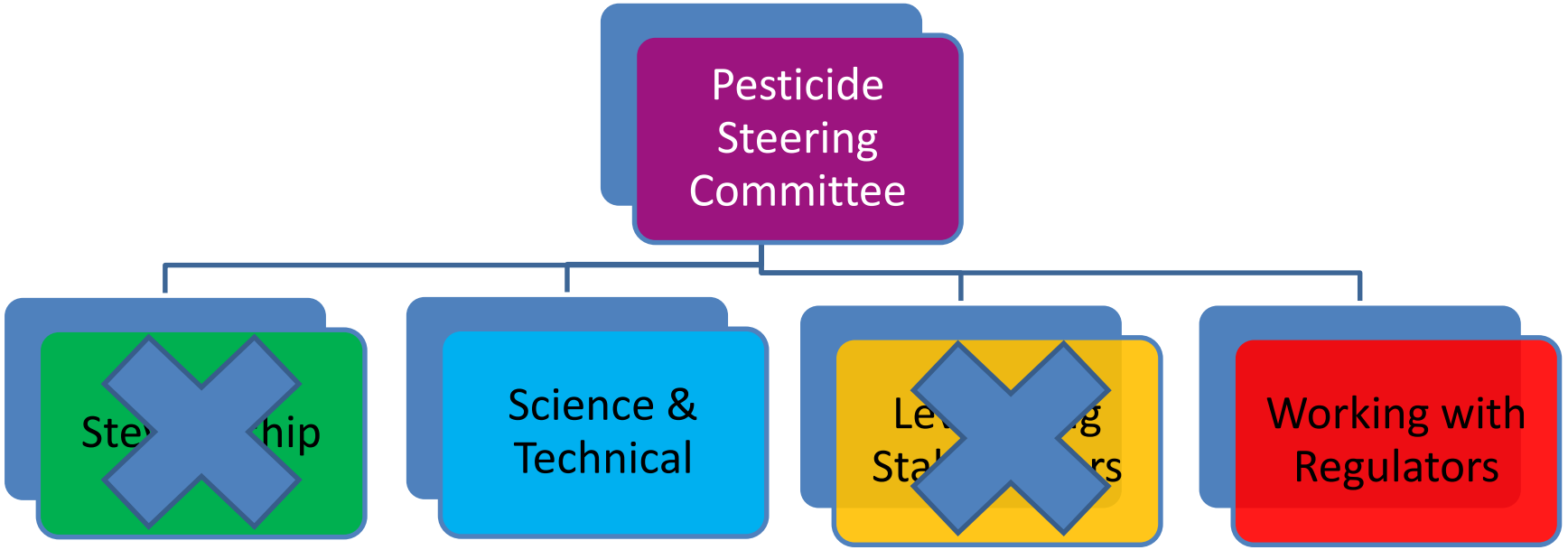
Agreed Structure



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Actions:

Certify More Pesticides

- How
  - Continue working with IR4/EPA/Manufacturers to minimize costs by combining with other registrations
    - IR-4
  - Prioritize Chemicals
  - Maintain FDA Relationship
  - Register import tolerances in USA

- Also:
  - Communicate what chemicals should be eliminated at origin
  - Communicate that we are in need of Import tolerances

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Actions

Drive Compliance with Producers

- How
  - Continue to work with key importing countries
    - Argentina
    - India
    - Sri Lanka
    - Kenya
    - Malawi, etc.
  - FAO-IGG
    - Work Streams
    - Engagement

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Registrant Engagement

- Direct Engagement
  - Bayer
  - Syngenta
  - BASF
  - Gowan
  - Nisso
  - Etc.
- CropLife
  - Food & Beverage Committee

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USTA as Registrant - Activities

- PRIA (Pesticide Registration Improvement Act Process)
  - Opportunity to reduce fees
    - Worked with EPA Ombudsman
    - Tea Association granted Small Business Waiver

- Partnered and Leveraged IR-4 / CropLife
  - Leveraging Relationship to assist Registration Packet/Consultancy

- Funding / Co-Funding Registration Process
  - Membership Funded

- Consultant to Lead Process
  - Developed Core Competencies
    - Intimate knowledge of US EPA pesticide regulations, especially with regard to MRL submissions. Previous experience interacting with EPA staff in response to regulatory submissions and ability to persuasively interact with EPA on data adequacy and submission fee issues.
    - Ability to interpret pesticide field trial data to determine if data will be sufficient to meet US EPA requirements for tea. Ability to possibly compile and submit US MRL petitions on behalf of USTA.
    - Strong relationships with pesticide registrants to further USTA's mission of establishing additional US tea MRLs. Ability to persuade registrants to support our MRL needs and negotiate with registrants on possible work and/or fee sharing.
    - Able to keep tea industry top of mind with registrants to ensure the development of a strong pipeline of MRL submission for new compounds.
    - Familiarity with Codex process

- Propiconazole Success
  - Small Business Waiver granted
  - Submission completed
  - Only two issues with screening that were answered
  - Tolerance Granted in 2015

- **Looking to leverage success for Hexythiazox**

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1. Networking Relationships
    I. FDA
        a. Enforcement Discretion
        b. Continued to Engage
    II. EPA
        a. Minor Use
        b. Pilot Program
    III. IR-4
    IV. FAO – IGG
        a. Global Harmonization
    V. CropLife
        a. Food & Beverage Committee
    VI. Registrant

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Progress

Chemicals Authorized for Use – Prior to 2008

Chemical	PPM	Most Recent Federal Register Date
Glyphosate		
Tea: Dried	1	10/1/1980
Tea: Instant	7.0	10/1/1980
Propargite	10	8/1/2007
Pyriproxyfen	.02	8/22/2007

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Progress

Chemicals Currently Authorized for Use on Tea in the USA

Chemical	PPM	Most Recent Federal Register Date
Acequinocyl	40	1/18/2017
Acetamiprid	50	2/10/2010
Azoxystrobin	20	5/1/2015
Bifenthrin	30	9/14/2012
Buprofezin	20	10/17/2012
Carfentrazone-ethyl	.1	3/31/2004
Chlorantraniliprole	50	7/27/2011
Chlorfenapyr	70	1/26/2018
Clothianidin	70	3/29/2013
Cyantraniliprole	30	3/22/2017
Cyclaniliprole	50	8/3/2017
Dicofol: Tea Dried	50	3/25/2013
Dicofol: Tea Instant	30	3/25/2013
Dinotefuran	50	9/12/2012
Ethiprole	30	4/6/2011

Chemical	PPM	Most Recent Federal Register Date
Etofenprox	5	11/27/2013
Etoxazole	15	4/13/2011
Fenazaquin	9	5/25/2017
Fenpropathrin	2	11/28/2012
Fenproximate/Fenpyroximate	20	12/12/2012
Flonicamid	40	5/11/2017
Fluazinam	6.0	5/11/2017
Flubendiamide	50	7/5/2017
Glyphosate: Tea Dried	1	10/1/1980
Glyphosate: Tea Instant	7.0	10/1/1980
Propargite	10	8/1/2007
Propiconazole	4	12/24/2015
Pyriproxyfen	15	2/22/2016
Spinosad	.02	12/5/2007
Spiromesifen	40	1/16/2013
Thiamethoxam	20	3/27/2013
Tolfenpyrad	30	1/9/2014

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Progress

Pending Chemical Registrations in the USA

Chemical	Expected Tolerance Year
Abamectin*	2019
Avermectin*	2020
L-Cyhalothrin^	2020
Cyflumetofen*	2018
Cypermethrin^	2020
Imidacloprid*	2018
Methoxyfenozide*	2018
Permethrin^	2020
Pyrifluquinazon*	2019
Spinetoram*	2018

* Submitted

^ Not in PRIA Action

NOTE THESE CHEMICALS SHOULD NOT BE USED ON ANY TEA PRODUCT BOUND FOR USA

Chemicals With No Possibility of Approval in U.S.

Prohibited Chemicals	STATUS
DDT	Banned
Lindane	Banned
Endosulfan	Expired – will not be renewed
Ethion	Not Registered for ANY use in USA
Tetradifon	Not Registered for ANY use in USA
Triazophos	Not Registered for ANY use in USA

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Progress

FDA AUDIT

- 12 Samples were violative
  - All had green tea from China
  - 1 Herbal
  - 2 Tea & Herbal
- 7 Brands
  - Multiple Samples of each

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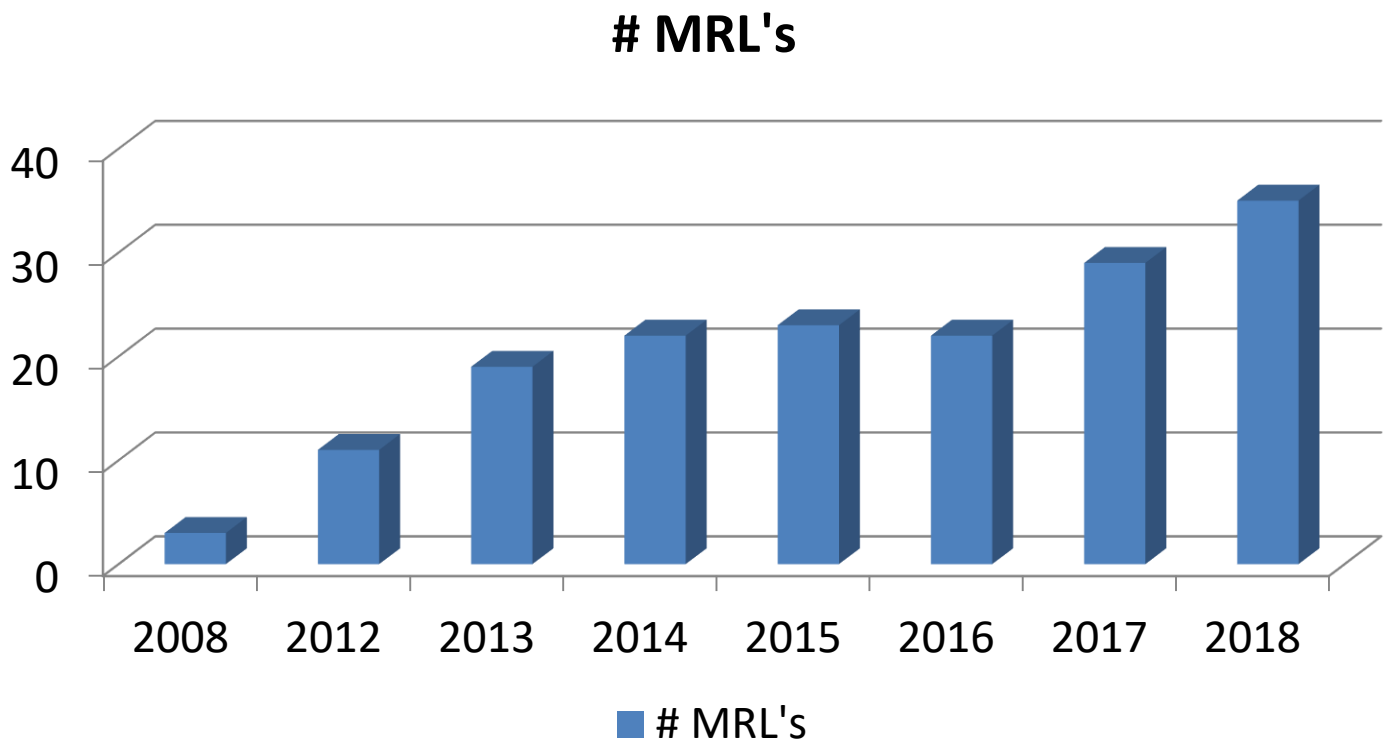
Progress



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Pesticide Priority List

USTA Priority List

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USTA Communications

Requested of Origin Producers:

1. To review the list of authorized chemicals allowed in the U.S. and have their growers comply with our import regulations as established by FDA. (Attachment 1)

2. To send us a list of those chemical tolerances authorized for use on tea in their country so that we have an up-to-date database.

3. If any work is being done to develop and/or register new chemicals for use on tea in their origin, that they
   a. Let us know.
   b. Inform the chemical manufacturer that they should submit to EPA a request for an import tolerance to be established on that chemical in the U.S.A.

4. Support our efforts in increasing the number of MRL's in the United States and harmonizing them between the US and producer countries as well.

Engagement with PPP Industry:

To that end, we are looking to engage directly with Chemical Manufactures in order to address the following:

1. Register old molecules (that may be off patent) that are used on tea for import tolerances;
2. Provide the USTA with data package to allow us to register these older molecules:
3. Engage more effectively across international divisions, so that when international registration occurs, a corresponding tolerance application is completed in the U.S.
4. Determine how tea can become a higher profile within their scope of activity.

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- Going Forward - Networking

- FDA
  - Continually Update
  - Maintain Enforcement Discretion
- IR-4
  - Include Tea in new registrations
  - Maintain contacts
- EPA
  - Minor Use
  - Pilot Program
  - Advice and engagement
- PPP Industry
  - CropLife
  - Direct Engagement
- Global Influencers/Stakeholders

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- Going Forward -

- Increase Number of MRL's for Tea
  - Continue to feed funnel of chemicals for Approval
  - Maintain contact with FDA/EPA for opportunities
    - Pilot Program
    - Minor Use
  - Continue engagement through CropLife
  - Continue to assess, update and act on Pesticide Priority List
  - Continue FAO-IGG Engagement

EPA Pilot Proposal

- Tea Association as Registrant
  - Use Learnings from Propiconazole submission and apply
  - Determine if additional funding necessary
  - Form cooperatives between Origin and USTA for submissions
    - E.g Japan, Vietnam, China

- Raise Awareness to Stakeholders
  - Continue Networking
    - FDA/EPA
    - GMA
    - FAO
    - IR-4
    - Origin Countries
      - TRI's
      - Tea Boards
      - Growers
    - Chemical Manufacturers
      - CropLife

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- Going Forward -

Current Facts

- Teas with minimal pesticide residues are safe
- Large portions of pesticide residues are not actually consumed – low transferability
- Obtaining compliant tea is not always possible
- Domestic farmers and pesticide distributors do not have an incentive to obtain MRL's for a foreign crop
- Establishment of MRL's is Expensive and Time Consuming

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Tea – Bottom Line

- **Tea is Safe**
- **Any Rejections have been legislative**
  - **None since 2008**
- **Research shows that Human Health is ultimately *enhanced* by Tea and that no risk to Human Health has EVER been demonstrated at current residual levels**
- **The Tea Industry is:**
  - **Aware of our responsibilities**
  - **Working in Partnership**
    - **Internally**
    - **Domestically**
    - **Internationally**
    - **Collaboratively with U. S. Government Agencies**

JUNE is NATIONAL ICED TEA MONTH!!!

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Tea – Bottom Line

- Questions?