



Quality Inspection & Certification of Nuts & Dried Fruit in the United States

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Who is DFA?

- A private sector industry trade association of dried fruit & tree nut processors.
- Founded in 1908 as “Dried Fruit Association of California (DFA)”
- 89 member companies.
 - Many brands you recognize...
- 300 employees.





LABORATORY
SERVICES



FOOD SAFETY TRAINING
AND CONSULTING



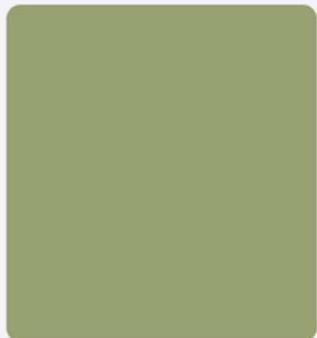
COMMODITY
INSPECTION



RESEARCH



ARBITRATION



DFA

**SAFE FOOD IS
OUR BUSINESS**

www.dfaofca.com

916.561.5900

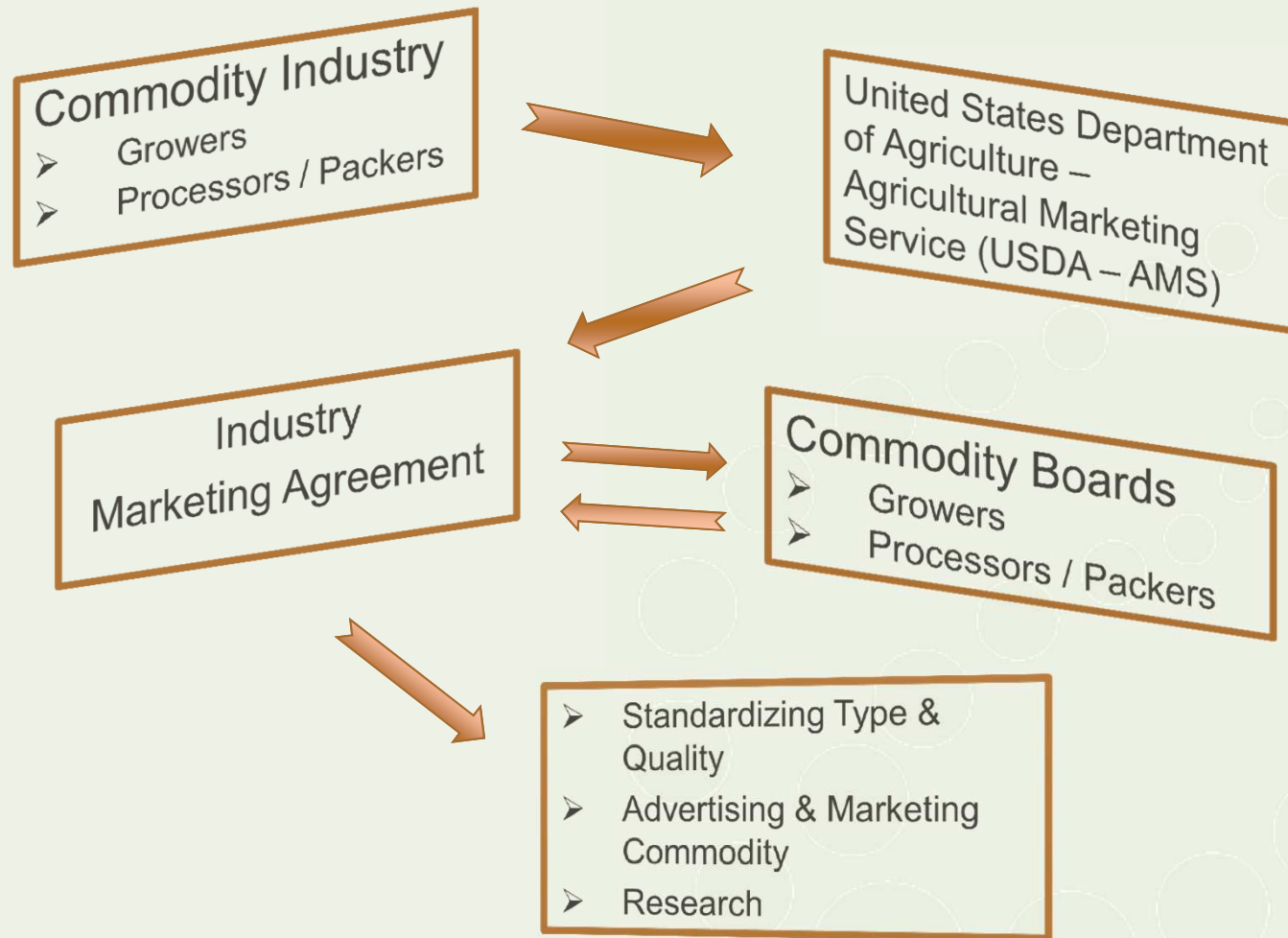


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US Agricultural Commodities



US Commodity Boards

- Oversight by USDA-AMS
- Funded by the Industry & USDA
- Self –regulated by the Industry! (Growers & Processors)



US Commodity Boards

- Choose how to manage and regulate quality....
 - Mandatory or Voluntary commodity inspections
 - At Receiving point or Shipping Point (or both)
 - Inspection Agency
 - Mandatory inspections require minimum quality standards to be enforced and followed by all industry members



Inspection Point

Inspection Point

Quality Standards (USA)

- United States Department of Agriculture – Agricultural Marketing Service (USDA – AMS)

USDA Quality Grade Standards

Developed to help support industry
Standardized grades for commodity types



USDA Quality Standards

Quality Standards by Commodity Groups:

- Cotton
- Dairy
- Fresh Fruits & Vegetables (including Fresh Fruits and Vegetables for Processing)
- Livestock (including wool and Mohair)
- **Nuts & Specialty Crops**
- Poultry & Eggs (including rabbits)
- Processed Fruits & Vegetables
- Tobacco





DFA Quality Inspection Services

- **Receiving Inspections (Raw Goods)**

Provides grower payment and processing information for handlers.

- **Outbound Inspections (Finished Goods)**

To ensure quality to the customer and processing feedback to the handler.

- **Red Seal Certificate (Finished Goods)**

Certificate of Food Safety practices and Product Quality contract specifications between Packer & Buyer. Available to DFA of California members.



Dried Produce Inspected by DFA....

Tree Nuts.....



Dried Fruit.....



Dried Produce Inspection....

Tree Nuts.....



Receiving Inspection – Voluntary, 3rd Party, Federal, State
Outbound – DFA



Receiving Inspection – Federal, State
Outbound – Voluntary, 3rd Party, Federal, State



Receiving Inspection – Voluntary, 3rd Party, Federal, State
Outbound – Voluntary, 3rd Party, Federal, State



Receiving Inspection – Voluntary, 3rd Party, Federal, State
Outbound – Voluntary, 3rd Party, Federal, State

Dried Produce Inspection....

Dried Fruit.....



Receiving Inspection –DFA

Outbound –DFA



Receiving Inspection – Voluntary, 3rd Party, Federal, State

Outbound – Voluntary, 3rd Party, Federal, State



Receiving Inspection – Federal

Outbound – Federal



Receiving Inspection – Voluntary, 3rd Party, Federal, State

Outbound – Voluntary, 3rd Party, Federal, State



Laboratory Services

A Brief History...

- Started with micro-analytical (filth) analyses in the 1940s.
- Pesticide testing added in the 1960s.
- Currently have five locations:
 - Fresno
 - Yuba City
 - Modesto
 - Kerman
 - Winters

Satellite laboratories

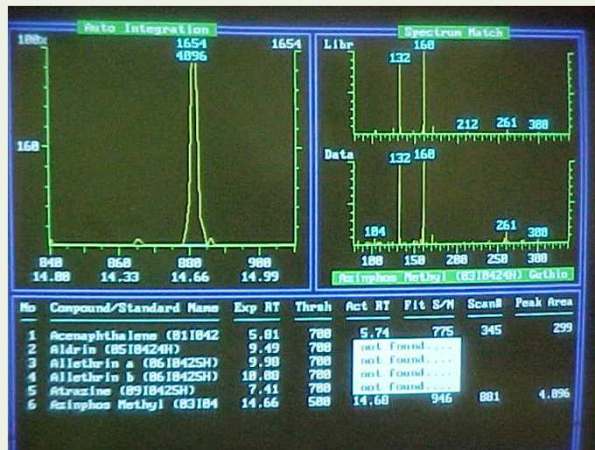


Food Additives



- Include preservative compounds:
 - Sulfates & sorbic acid in dried fruits.
 - BHT in nuts.
- Amounts are critical.

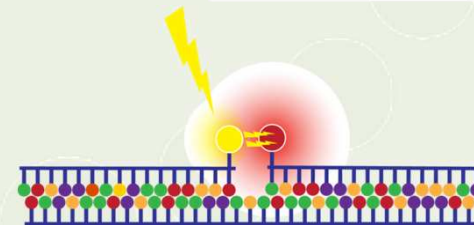
Pesticide Analysis



- Sample extracts are tested via GC-MS and HPLC/MS/MS
 - Pesticide fingerprint is created.
 - Screens for 300 compounds
 - Detects residues in the 5-25 ppb range.

Microbiology

- Tests for bacteria, yeast & molds that can cause spoilage/illness.
- Pathogen testing:
 - Example is *Salmonella* in nuts.
 - We use PCR (DNA testing) and ELISA (Enzyme-linked).



Mycotoxins

- Toxic by-products of mold growth.
- Insect damage increases mold contamination.
- Key mycotoxins of interest:
 - *Aflatoxin (nuts, dried figs).*
 - *Ochratoxin (dried fruits).*



Fumigation Research

- Dried fruits & nuts are routinely fumigated to kill insects.
- DFA conducts research on new fumigation methods & compounds.
- We even raise our own insects!



Accreditations



- **USDA Approved Voluntary Aflatoxin Sampling Plan (VASP) Certificate Laboratories for Almonds.**



- **ISO 17025:2005**



- **California State Environmental Laboratory Accreditation**



- **USDA Approved Pistachio Aflatoxin Laboratory (Export Program)**



- **Official Laboratory, Japanese Ministry of Health, Labor & Welfare**



- **US-FDA Partnership Agreement (PA-07)**



Food Safety Services

- Global Food Safety Initiative (GFSI) Audits
- GFSI Pre-Assessments
- HACCP Verification Audits
- Food Safety Consulting and Training
- DFA Member Food Safety Standard
- Other Audit Types (ABC DV Audits, (cGMP) Audits, Huller & Dryer Audits)

