



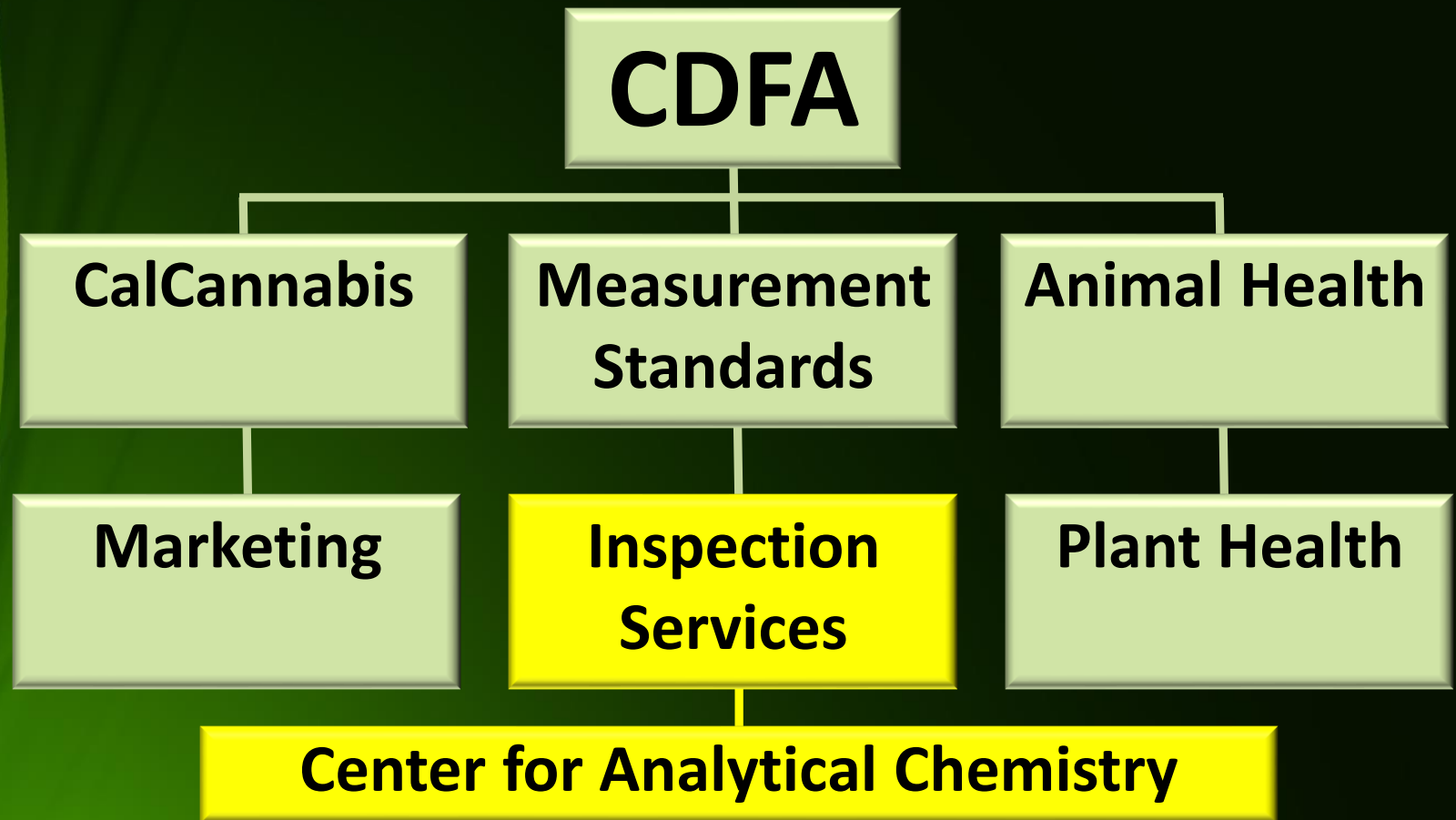
Food Safety in California: An Integrated Approach

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Agenda

- Organizational Overview
- Pesticide Data Program
- State monitoring program
- State commercial feed program
- State fertilizer inspection program

Organizational Overview



Pesticide Data Program

- Federal program (USDA)
- Food Quality Protection Act of 1996
- Most comprehensive pesticide residue database



Pesticide Data Program

- Used by many organizations
- PDP's data included in the GEMS database
- No enforcement



Pesticide Data Program

- PDP Data used to:
 - Assess dietary exposure
 - Set/renew/revoke tolerances
 - Facilitate global trade/exports



Pesticide Data Program

- Test fruit, vegetables, grains, meat, dairy, honey, infant formula, etc.
 - Focus on infants and children



Pesticide Data Program

- 7 labs nationwide
- 14 commodities
- ~10,000 samples collected in 10 states



Pesticide Data Program

- Commodities are sampled monthly (60 samples/month)
- CA tests ~1,800 samples annually
- 470 pesticides in screen



Pesticide Data Program

- Analyzed by GCMS/MS and LCMS/MS
- Most pesticides LOD = 1 ppb
- Highest finding – 296 pesticides in a set of 30 strawberry samples



State Monitoring Program

- Enforcement of proper pesticide use
- California Department of Pesticide Regulation (CDPR)
- Test produce sold in CA
- ~3,800 samples/year



State Monitoring Program

- “Environmental Justice”
 - Focus on foods highly consumed by low income and minority communities
 - Multi-lingual publications



State Monitoring Program

- Cactus pads (nopales) from Mexico
 - Dimethoate (NTE), 310 mg/kg
 - Omethoate (NTE), 400 mg/kg
 - Monocrotophos (banned), 18 mg/kg
 - Methidathion (banned), 25 mg/kg



State Monitoring Program

- Cactus pads quarantined and removed from store shelves or destroyed
- Warning issued by CDPR



State Commercial Feed Program

- FFLDRS (Feed, Fertilizer & Livestock Drugs Regulatory Services)
- Compliance, label accuracy, complaint investigation



State Commercial Feed Program

- Ensure clean & wholesome supply of meat and milk
- Fair marketplace



State Commercial Feed Program

- CA imports 22 million tons of feed annually
- 80% grain feed is imported
- Most organic feed imported due to GMO



State Commercial Feed Program

- Aflatoxin
 - Naturally occurring toxin produced by mold
 - Aflatoxin in feed conveyed to milk



State Commercial Feed Program

- Aflatoxin is VERY toxic
 - Liver damage
 - Birth defects
- Immune system
- Carcinogenic
- Can't kill it



State Commercial Feed Program

- Milk exported from CA to AZ had high levels of Aflatoxin
- Traced back a CA organic dairy (canola meal feed from Canada)



State Commercial Feed Program

- Removed feed and 2 days later milk was Aflatoxin free



State Fertilizer Inspection Program

- Ensure fertilizing materials are safe and effective
- Fair marketplace



State Fertilizer Inspection Program

- Cannabis
 - Growers used fertilizer with added synthetic plant growth regulators (PGRs)
 - Paclobutrazol, Daminozide, Chlormequat Chloride



State Fertilizer Inspection Program

- Plant Growth regulators
 - Get into plant cells
 - Smaller, more compact plants
 - Earlier flowering



State Fertilizer Inspection Program

- Post-harvest “micro-nutrient” spray
 - Crystallizes on flowers
 - Adds considerable weight



State Fertilizer Inspection Program

- Medically compromised people inhale these compounds



State Fertilizer Inspection Program

- Products removed from market
- One CA company fined \$150,000



Future Plans

- Method expansion
- GMO screening for food & feed
- FDA collaboration – 1,100 pesticides by HRMS
- Hemp potency testing



Thank You

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