

INDUSTRY UPDATE

2022/2023

Bob Klein, Manager
Administrative Committee for Pistachios
California Pistachio Research Board

HOUSEKEEPING

- ▶ California Pistachio Research Board
 - ▶ Elections for Members 2023
 - ▶ Nomination Hearing 4:30 PM Executive Boardroom
- ▶ ACP Continuation Referendum
 - ▶ 95.12% by producer, 95.35% by volume in favor
- ▶ Staff changes
 - ▶ Juanita Owens retired January 15
 - ▶ Laura Larsen, Compliance officer
 - ▶ Cindy Dean, Office manager

2022 California Pistachio Crop

- ▶ Headwinds
 - ▶ Record crops prior two years
 - ▶ Uncertain water supplies
 - ▶ Variable chill conditions
 - ▶ High temperatures during bloom
 - ▶ Late frost

2022 California Pistachio Crop

- ▶ 878.7 million pounds
 - ▶ 75.8% open inshell (84.7% in 2021)
 - ▶ 18.3% closed shell (9.1% in 2021)
- ▶ Overall small sizes
- ▶ Stain
- ▶ Poor removal from tree

2023 Pistachio Crop Outlook

- ▶ On Year - bud counts are good
- ▶ Chill - best chill in at least a decade
 - ▶ Cool/cold December
 - ▶ Foggy, cloudy
- ▶ Rain
- ▶ Acreage up 6%
- ▶ Negatives?

OCHRATOXIN A (OTA)

- ▶ Mycotoxin caused by infection by some *Aspergillus* sp.
- ▶ OTA found in dark stain, insect damage
- ▶ In 2020, similar levels as aflatoxin
- ▶ Field biology/interaction among *Aspergillus* species?
- ▶ European Union enacted a maximum level for pistachios
 - ▶ 5 ppb in RTE, 10 ppb for further processing
 - ▶ Stricter than aflatoxin despite lower toxicity, risk
- ▶ **Expect twice as many rejections in EU**

OTA Control

- ▶ Should be similar to aflatoxin/NOW
 - ▶ AF36 Prevail vs. Aflaguard
- ▶ 1 in 10 NOW damaged nuts have AF
 - ▶ 1 in 10 have OTA?
- ▶ Processors control by sorting for NOW
 - ▶ EU rejection rates => sorting stringency
- ▶ Threshold for NOW premium will likely be lower

Kernel Concerns



Internal Kernel Discoloration (IKD)



IKD

- ▶ First observed in about 2015
 - ▶ Primarily in new plantings near alfalfa & pasture
- ▶ Took a while before it was associated with Golden Hills and Lost Hills
- ▶ Similarities to bug feeding damage
 - ▶ Joe Coelho first demonstrated in cage studies that not caused by insects
 - ▶ Confirmed in studies by Kent Daane

IKD - What do we know?

- ▶ Almost entirely in Golden Hills and Lost Hills
 - ▶ Up to 30% of nuts affected
- ▶ Cause unknown
 - ▶ Not insect or pathogen
 - ▶ Genetic basis
- ▶ No effect on flavor
- ▶ No effect on nutritional composition
- ▶ No external indication

IKD and the Future

- ▶ Research to determine cause and ameliorate!
 - ▶ Environmental triggers - heat, salt, specific ion, ...
- ▶ USDA Specialty Crop Inspection
 - ▶ Considers it a scorable defect for outgoing
 - ▶ Ongoing discussions
 - ▶ Incoming inspection mirrors outgoing
 - ▶ Very expensive!!

Rodenticides

- ▶ All rodenticides under registration review
 - ▶ Labels may vary depending on pest, etc.
- ▶ Preliminary Interim Decisions
 - ▶ All become restricted-use products
 - ▶ Above ground applications eliminated
 - ▶ Only bait stations and within-burrow

Rodenticides

- ▶ No within-burrow in croplands during growing season
- ▶ Carcass searches required every 1-2 days for at least two weeks
- ▶ Carcass disposal
- ▶ Non-target mortalities must be reported
- ▶ ESA designations?
- ▶ PF-10 respirators

Comments

<https://responsiblerodenticides.org/>

1. Anticoagulant PID: <https://www.regulations.gov/document/EPA-HQ-OPP-2015-0778-0094>
2. Zinc phosphide PID: <https://www.regulations.gov/document/EPA-HQ-OPP-2016-0140-0031>
3. Strychnine PID: <https://www.regulations.gov/document/EPA-HQ-OPP-2015-0754-0025>
4. Bromethalin and cholecalciferol PID: <https://www.regulations.gov/document/EPA-HQ-OPP-2016-0077-0024>

