

Enhancing food safety capacity of western elderberry producers: best practices for harvest and processing

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Problem Statement / Issue Definition:

- Blue elderberry (*Sambucus nigra* spp. *cerulea*) is a native perennial that grows naturally in California and other western states in the U.S.
- Often planted in farm hedgerows to encourage biodiversity and carbon sequestration
- Elder fruit and flowers increasingly used in value-added food products, such as syrups, cordials, jellies, teas, and vinegars
- Need to address **potential food safety issues** for elderberry producers:
 - **Toxicity:** stems contain sambunigrin, a toxic compound that can be converted into hydrogen cyanide after ingestion
 - **pH variability of elderberry:** sub-species, cultivar, ripeness
 - **Sanitation:** harvesting, post-harvest handling, freezing, drying, and processing
 - **Regulatory compliance:** FSMA, state regulations (including Cottage Food Laws)



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Approach / Methods:

- Literature review
- Site visits
- Survey
- Guides
- PSA Training
- PCQI Training
- Workshops
- Videos



SURVEY AIMS

- ❖ To understand the current practices related to elder fruit and flower value-added processing.
- ❖ To determine current food safety practices and identify food safety training needs for elder fruit and flower processors.

SURVEY DESIGN

A 43-question survey was developed targeting both **elderberry growers and processors**.



1. **The survey was reviewed by** five food safety, elderberry production, and evaluation specialists prior to dissemination.
2. **Survey was piloted** with three elderberry growers/small-scale processors.
3. **The survey was administered online via Qualtrics and shared via email by three organizations with a self-selected elderberry-interested audience** (432 recipients total) and posted to six elderberry-related groups on Facebook, with combined membership totaling over 1,000 individuals. This research protocol was approved by the Institutional Review Board at UC Davis.

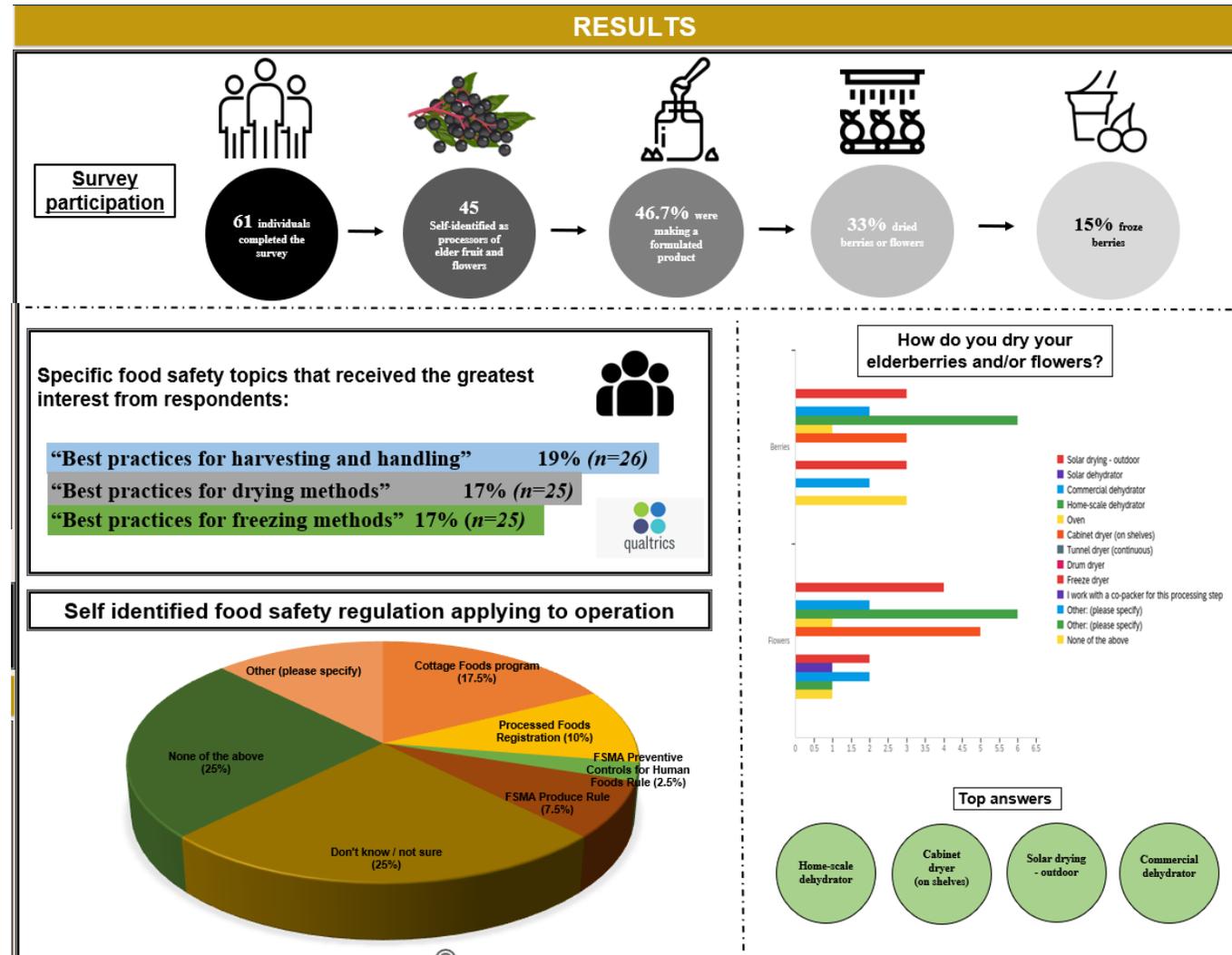


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Results / Outcomes:



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Results / Outcomes:

- Literature review
- (4) site visits to elderberry growers / processors
- Survey (n=61) of elderberry growers / processors
- 2-part webinar series addressing food safety considerations (125 registrants)
- Supported (2) California elderberry processors/handlers in completing a Preventive Controls Qualified Individual (PCQI) training

In progress:

- (2) PSA grower trainings (May 2023)
- (4) guides on best practices
- (4-5) hands-on workshops across California (June-August 2023/2024)
- (4-5) short videos (June-August 2023)



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