



AMERICAN
CIDER
ASSOCIATION

DOES CIDER NEED TANNIN?

PRESENTED BY:

Tom Oliver (moderator), Scott Katsma, Kari Williams,
Christine Walter





Your go-to cider making resource



ciderinstitute.com

AGENDA

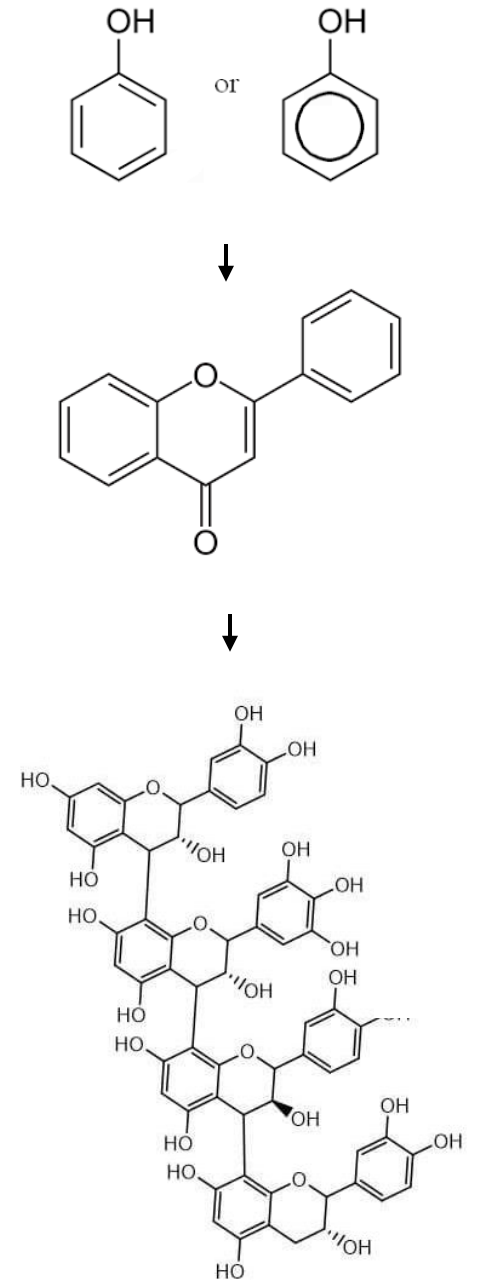
- 1 Introduction
- 2 Tannin Overview
- 3 Tastes & Presentations - Scott Katsma, Kari Williams, Christine Walter, Tom Oliver
- 4 Tannin Analysis
- 5 Questions & Answers

Conclusions?



But First, What is TANNIN?

- Non-aromatic chains of phenolic compounds - astringent, bitter plant biomolecules – that either bind, precipitate or shrink proteins
- Exist as chains of linked procyanidin units
- Various plant sources: **apple**, plantain, persimmon, seeds, oak, gall nut, other trees
- Antioxidant, antimicrobial, and antiviral properties
- Different variations in size and subunits affect properties:
 - Short chain, small polymers → contribute bitterness (Hard Tannin)
 - Long-chain, big polymers → contributes astringency (Soft Tannin)
- Dependent on:
 - Fruit Variety
 - Maturation (Polymerization)
 - Maceration



TANNIN: Apples vs. Cider

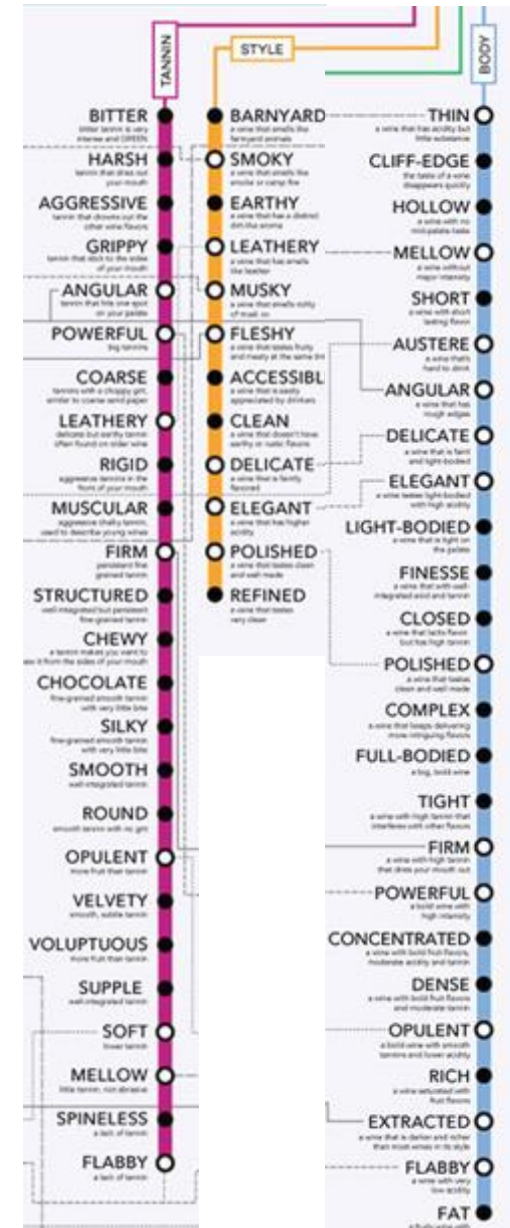
- Long-Ashton Research Station (UK) defines bittersharp/bittersweet apples as 2000ppm phenolic content or more – in the apple
- Phenolic measurement of apples is different from tannin content and characteristics in cider; as phenols bind up, precipitate out, or form larger polyphenols
- Tannin levels vary considerably year to year, place to place, soil, type of tree, rootstock, fertilization, etc.
- Higher phenolic content doesn't necessarily translate to higher perceived tannin
- Smaller, short-chain tannins are usually more biting or harsh
- Tannin perception heavily dependent on acid/sweetness milieu

Cultivar	Total phenols (mg/L)
Fuji	220
Granny Smith	360
Golden Russet	900
Harrison	930
Michelin	1400
Redfield	1500
Brown Snout	1600
Foxwelp	1700
Virginia Crab, Hewes	1900
Dabinett	2400
Yarlington Mill	2200
Stoke Red	2800
Porter's Perfection	3000
Chisel Jersey	4200
Medaille D'Or	8200

WSU Cultivar Performance Database

TASTING TANNIN: Bitterness & Astringency

- Trigeminal nerve activation caused by interaction between salivary proteins and apple tannin
 - Different for every person based on salivary gland flow rate
- Aftertaste vs. Astringency
 - Tactile – drying, rough, or granular sensation
- Tannin Descriptors and Intensity give context and contribute to overall body and style
- Examples of mouthfeel:
 - Tannin overwhelms palate and is unincorporated
 - Pronounced, big tannins linger and dry out the mouth
 - Choppy, grit like tannin
 - Delicate, earthy, leathery tannin
 - Persistent but well-integrated
 - Plush, fine-grained tannin with subtle grip
 - More fruit than tannin



DOES CIDER NEED TANNIN?

	<u>TANNIN (mg/L)*</u>
CITY FRUIT 2023 <i>Seattle Cider Co</i> <i>Seattle, WA</i>	??
WILDE WOODS <i>Snowcapped Cider</i> <i>Austin, CO</i>	??
ENDLESS HARVEST <i>Bauman's Cider</i> <i>Gervais, OR</i>	??
BOOM SEASON 2023 PERRY <i>Oliver's Cider and Perry</i> <i>Herefordshire, UK</i>	??



CITY FRUIT 2023

6.5%



WILDE WOODS

7.4%



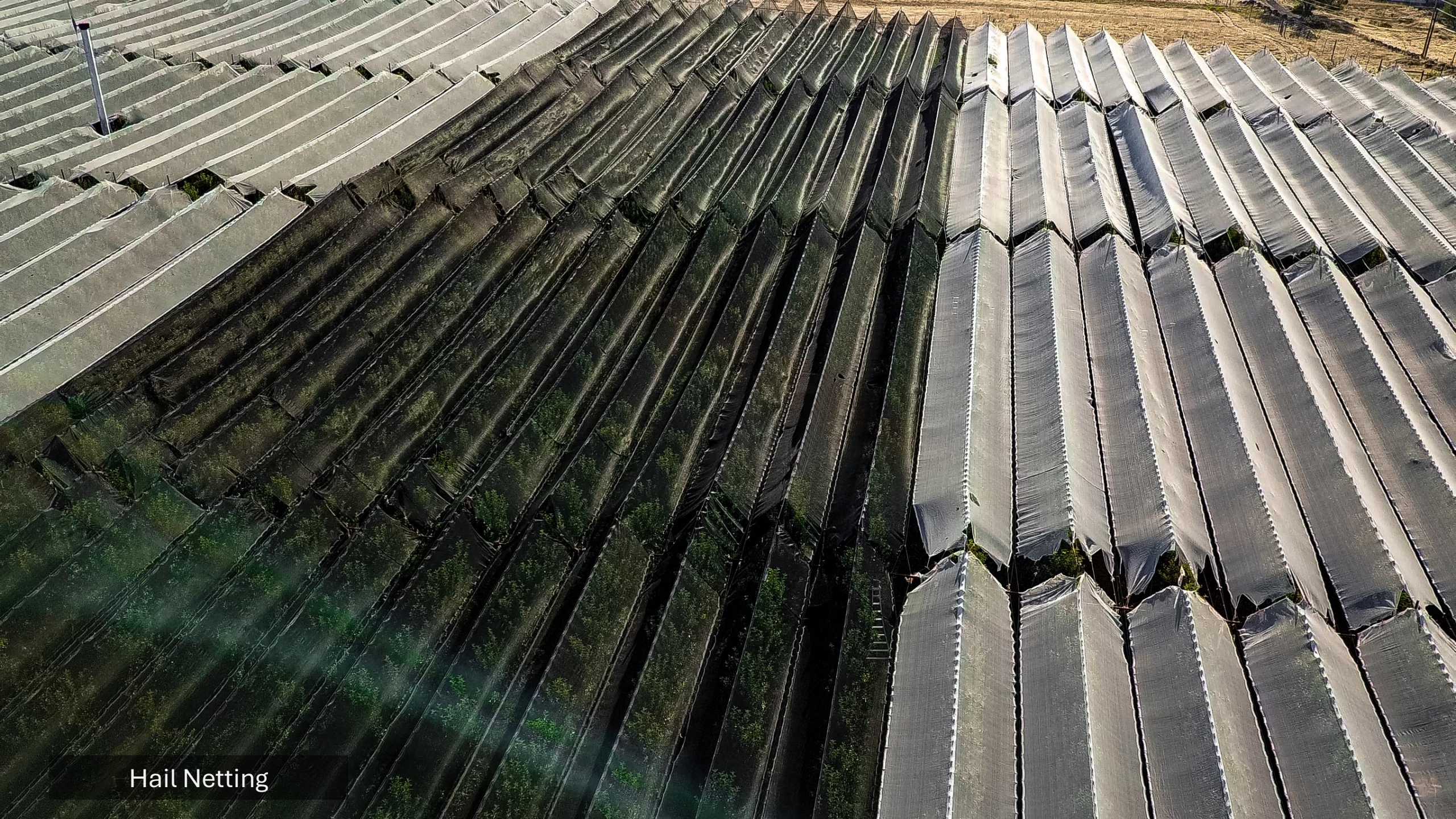
Peach Orchard



Galas, 40 year-old super spindles



Surface Creek Valley Orchard



Hail Netting



River Orchard





ENDLESS HARVEST

6.3%

Oliver's

CIDER & PERRY

BOOM

Season 2023 Perry

3.4%

DOES CIDER NEED TANNIN?

	<u>TANNIN (mg/L)</u>
CITY FRUIT 2023 <i>Seattle Cider Co</i> <i>Seattle, WA</i>	47.8
WILDE WOODS <i>Snowcapped Cider</i> <i>Austin, CO</i>	60.7
ENDLESS HARVEST <i>Bauman's Cider</i> <i>Gervais, OR</i>	125
BOOM SEASON 2023 PERRY <i>Oliver's Cider and Perry</i> <i>Herefordshire, UK</i>	335



Thank You!

This presentation is part of
Making Amazing Cider Track
Curated by
The Cider Institute of North America
at CiderCon 2025