Cider School Syllabus – William Grote

- Start with good information, my first ciders were based on this "famous recipe" from a "famous homebrew" website, my results were famous for tasting like water and giving a hangover that left me a fetal position for days.

Award Winning Apfelwein Recipe (German Hard Cider)

5 Gallons 100% Apple Juice (No preservatives or additives) I use Tree Top Apple Juice
2 pounds of dextrose (corn sugar) in one pound bags
1 five gram packet of Montrachet Wine Yeast

  - Why is this so bad?
    - Treetop
    - Too much sugar (goes from 12 brix to 16.2) actually makes the final cider watery since its just adding alcohol without acids, flavor compounds, tannins
    - Temperature Control (there is none)
  - What would be ideal?
    - 13.5 brix
    - 7 g /malic acid / liter
    - 50 - 60F
    - Any yeast you like – but low Sulphur ones are harder to screw up
  - So start with the best juice you can, add some crabs if you can, and if all else fails….**ADD CRYO**

- Making and using your own cryo-concentrate – the magic elixir that improves everything
  - Freeze ¾ gallon in its plastic for 2 days
  - Thaw into a funnel/flask in the fridge for 2 days
    - Target 28 Brix
    - Repeat process / Re-freeze it to get 40 Brix
  - Can be used to adjust pre-fermentation to raise the SG to 1.060-65
  - Can be used post fermentation to backsweeten
  - Lasts FOREVER in the fridge if its above 50 brix
  - Make your own cider syrup
  - Great use for low sugar, early season juice

- Temperature Control – KEY to less stress
  - Used Fridge
  - Corner in basement near window
    - Can use a smartplug (Wemo, Wyze, etc) plus a simple IFTT 'recipe' if you live in a cold climate
    - Wall off an area with a wall / window to outside and use a homemade CoolBot

- Homebrew kegs & CO2 – just do it!
    - Save an insane amount of time
    - Cheap when used ($40 / keg)
    - CO2 tank and hose are super useful for so many other things
        - Closed Pressure Transfer Racking
        - Blanketing finished cider
        - Carbonation
        - Killing Rats
    - Float and silicon tube to replace dip tube – suck from the top not the bottom
        - Helps stabilize your bottled cider as well
    - Blow CO2 through them to get rid of a lot of nasty smells (Sulphur compounds)

- Blending After Fermentation – not before
    - Each yeast and juice will have different final characteristics, blending gives complexity, recues so-so cider, rather than one flat one and one that's too acidic, now you have a blend that's perfect
    - Tasting is the best test, but measuring the acidity and SG is important and easy

- Back-sweeten – The secret no one wants to admit to using but everyone does.
    - Steve Woods (Farnum Hill) refers industry term RS (Residual Sugar) as "Returned Sugar"
    - Get a finishing hydrometer and test your favorite "dry" ciders – you will be shocked.
    - Almost every commercial cider maker I have met adds back some sort of sugar or juice to add body and balance, then uses a cross flow filter to sterilize, uses Velcorin – or both. These are not options for small scale production.
    - Stovetop pasteurization is easier than you think, but only needed if you plan to bottle (kegs again, are much MUCH less work)
    - Acidic ciders are more adjustable, a pre-back-seetened TA of 7-8 g/liter gives you a lot of room to work with – if all you have is 4-5 it might taste fine as is, but as soon as you add even a tiny bit of 'RS' it will taste out of balance and flabby.
    - Back-sweeten – sugar, cryo, cider syrup, honey – if maple, then the darkest grade you can find (which is usually the cheapest ;-)

- Closed Pressure Transfer Racking technique

- Stovetop Pasteurization Technique
    - https://www.homebrewtalk.com/threads/pasteurization-time-and-temperature-for-cider.581913/
- Disgorging Bottle Conditioned ciders – a fun way to make a huge mess