Section 1: Getting Oriented | 1: Your Climate Story

Activity 1 — Look up your climograph

To get a snapshot of the climate context you are working with, go to climatetoolbox.org and generate a Historical Climograph for your location using the 1991–2020 reference period.

Using your climograph, answer the following questions:

1. What months show the highest average precipitation? What months show the lowest?
2. How many consecutive months average less than 1 inch of rain?
3. Does the driest period overlap with the hottest temperatures? That overlap is where drought stress concentrates.
4. What crops are you growing when temperatures are high and rainfall is low?
5. What crops can you grow outside of that pattern? For example, in cooler, moist conditions?
6. Does anything surprise you, or confirm previous observations?

Notes:

Activity 2 — Map evapotranspiration and microclimate pressures on your farm

Reference evapotranspiration (ET_0) is a standardized estimate of the amount of water the atmosphere draws from the landscape through evaporation and transpiration. ET increases with higher temperatures, stronger winds, lower humidity, and more solar radiation. Knowing ET helps you understand how quickly stored soil moisture is depleted, independent of whether rain has fallen. For field-level ET data, see OpenET or AgriMet (PNW only) in the resources box below.

For each distinct area of your farm, note site characteristics that influence how quickly soil moisture is depleted.

Location / area	Exposure (wind, sun, slope)	Observation	Notes / what you've tried to reduce evapotranspiration or alter your microclimate
Example: West side of the field (east of cover crop)	Sun and wind exposure	Early peppers got sunburnt	As the summer cover crop grew taller, it served as a windbreak and prevented sunburn for later fruit

Questions worth working through:

- Where on your farm is ET pressure likely to be the highest. Take note of the spots that dry out fastest, receive the most wind, or heat up earliest.
- Where could a windbreak, shade structure, or ground cover meaningfully reduce atmospheric demand on crops?

Activity 3 — Map your last 5–7 seasons

Using farm records, journals, or memory, characterize each recent growing season. The goal is to start recognizing patterns and understanding how the local and regional climate influenced what was happening in your field and/or farm business.

If you don't have personal data to draw from, The National Oceanic and Atmospheric Administration (NOAA)'s historical climate data tool may provide valuable insights. You could also talk with nearby growers and/or local resource providers — they may have some insights to share about the history of the land you're growing on.

Year	Observations	What made it challenging?	What mitigation or management strategies would you implement moving forward?
Example: 2023	Example: long, wet spring	Example: Plant start business suffered	Example: Diversify early-season offerings

After completing the table, consider:

- What patterns do you notice across seasons? Consider timing, intensity, or the challenges those patterns created?
- Which conditions are becoming more frequent or more severe, and how does that inform what you want to be prepared for?

From pattern to strategy

Match the row or rows that most closely describe your farm. Most growers will recognize themselves in more than one. Check the box next to each one that applies. Use this information as a starting point, not a prescription.

If your climate pattern looks like this…	✓	Strategy areas worth exploring first
Reliable wet season followed by a long, predictable dry season (3–5+ consecutive months below 1 inch)	☐	Dry farming trials; deep soil building for water storage; planting timing and variety selection matched to the dry window
Dry season present but shorter or more variable — some years severe, others much less so	☐	Flexible irrigation management; soil moisture monitoring to guide decisions; cover crops and mulch to extend soil moisture; drought-tolerant variety exploration
High year-to-year variability — difficult to predict what the season will bring	☐	Practices robust across a range of conditions: organic matter building, diverse cover cropping, water storage, monitoring tools, crop and variety diversification
High evaporative demand throughout the growing season — hot, windy, exposed site	☐	Windbreaks and shelterbelts; shade structures or strategic interplanting; mulch; early-morning irrigation timing; reduced planting density in highest-exposure areas
Seasonal flooding or waterlogging in wet months alongside dry-season stress	☐	Drainage and soil structure management alongside water retention, earthworks, contour strip cropping, and organic matter to improve both drainage and moisture retention in dry conditions

PUTTING IT INTO PRACTICE

7. Which row in the table most closely describes your farm's dry season? Write it down or check the box.
8. What is your dry window? Note the specific months when rainfall reliably drops below 1 inch.
9. Which area of your farm has the highest ET pressure right now — which locations dry out the fastest, take the most wind, or heat up earliest in the season?

Carry forward: If you're working through the toolkit linearly, *your dry season length and highest-ET area carry into Article 2 as context for mapping your water sources and losses.*