

QUESTIONS TO DISCUSS WITH YOUR IRRIGATION DESIGNER





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QUESTIONS TO DISCUSS WITH YOUR DESIGNER

Designing and developing a new irrigation system is a major decision — one that can have lasting impacts for 20 years or more. When done well, it can pay dividends for decades, but missed opportunities during the process can lead to higher costs for just as long. Many important factors in the design process may be overlooked, simply because we may not ask the right questions to address their specific block and situation.

Below are some questions to consider and discuss with your designer before starting the design process. Some of these questions you may already have answers for and can share with your designer; others should be discussed together. Taking the time to address these points upfront can have a significant impact on the final irrigation design, making the system easier to manage while helping reduce maintenance and energy costs over the long term.

Orchard Planning

Are there any slope, elevation or topography issues that affect design?		Yes/No
<i>If yes, describe.</i>		
To address field uniformity will the system be designed and separated into irrigation sets/blocks to align with different water requirements?		Yes/No
Tree - Row Spacing (e.g., 16' x 20')		___ x ___
Harvest Direction (North/South, East/West)		
On a drip design, can an existing solid set system be left in place for frost protection?		Yes/No
For orchards being redeveloped, can existing infrastructure be utilized?		Yes/No
Filter	☐	Mainline ☐
Submains	☐	Laterals ☐
Will system provide frost protection?		Yes/No
<i>If yes, how many gallons per acre will be applied?</i>		
Can a cost estimate be provided that will show the energy cost over the life of the orchard for upsizing mainline and submain pipeline sizes to reduce pipeline friction and lowering energy cost?		Yes/No
Will system design meet standards for NRCS, SWEEP, or other incentive programs?		Yes/No
In areas with rodent issues what can be done to address damage and protect system components?		



Options to Consider			
Can an estimate be provided for system automation (controllers, field sensors, telemetry)?		Yes/No	
Can an estimate be provided for fertilizer injection? (talk through options)		Yes/No	
Simple venturi system	☐	Full Fertigation Skid with multiple injectors	☐
Can an estimate be provided as an option to irrigate by variety?		Yes/No	
Can an estimate be provided to supplied flush manifolds for use in flushing tubing?		Yes/No	

Additional Questions Based on Irrigation Method

Solid Set Sprinkler Questions	
Sprinkler Spacing (Feet)	x
Design Pressure at Sprinkler Head (Pounds per Square Inch)	

Micro Sprinkler Questions	
Micro Sprinklers per Tree	
Application Rate (Inches per Hour)	
Design Pressure at Sprinkler Head (Pounds per Square Inch)	
Nozzle Size (Gallons per Hour)	

Drip Irrigation Questions	
Single Line or Double Line	
Emitter Flow Rate (Gallons per Hour)	
Number of Emitters per Tree	
Total Flow per Tree (Gallons per Hour)	
Application Rate (Inches per Hour)	
Tubing on Surface or Buried	
If buried, what depth? (Inches)	

Water Source & Supply

What are the source(s) of water? (well, surface, district)				
Has well been tested for quality?				Yes/No
Issues Identified				
Manganese		Iron		
Particulates		Other		
Pumping Water Level (PWL)				
Available Gallons per Minute (Gallons per Minute)				

Filtration

What is the recommended type of filter?		
<i>Reason for selection</i>		
Quantity of filters		
Filtration mesh size		
What is the flush water volume?		
What is the required system pressure for filter operation?		
How will the discharge of flush water be managed?		
Will pre-filtration be required?		Yes/No
What are the maintenance needs of the system (flushing, filter cleaning)?		

Operational Costs

Will an energy use report be provided with the design?	Yes/No
* This should include items such as total energy cost, cost per acre to operate, options for upsizing pipelines to reduce energy use and options for more efficient pumps and motors.	

Warranties

Who provides warranties and what is covered?		
Item	Yrs Covered	Provider
Irrigation pipeline components		
Filtration components		
Air vents		
Filtration components		
Air vents		
Control valves		
Automation		
Installation		

Warranty Notes	
Will replacement parts be available?	Yes/No
Will documentation covering warranties, manufacture product literature and operational instructions be provided at the end of project?	Yes/No

NOTES

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Vision

California almonds make life better by what we grow and how we grow.

Mission

Expand global consumption of California almonds through leadership in strategic market development, innovative research and accelerated adoption of industry best practices.



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