Introduction to Vineyard Drip Irrigation Design
Part 2: Determining Pressure

A vineyard grower plants 400 vines and plans to install two, 1 GPH drip emitters per vine.

1. Using the friction loss charts, what is the minimum size Class 200 PVC pipe needed to supply each station with a flow of 7 GPM?

2. If the well is located 500 feet away from the closest corner to the top of the vineyard, how much pressure would you lose due to pipeline friction if using a ¾" Class 200 PVC Pipe? How much if using a 1" Class 200 PVC Pipe? (Assume 7 GPM flow rate)

3. How much pressure do you need at the well if the drip emitters require 15 PSI, and the system loses 12 PSI in the pipeline, 3 PSI through the valve, 2 PSI through the meter, and 2 PSI through a filter?