

Irrigation in Ag

AgSTEM Kit

Objective of Irrigation in Agriculture

Large number of plants that produce food for people need water to grow and thrive, but in most food producing areas there is inadequate rainfall.



Example: A tomato field of 100 acres:

Area approximate equal to
100 football fields

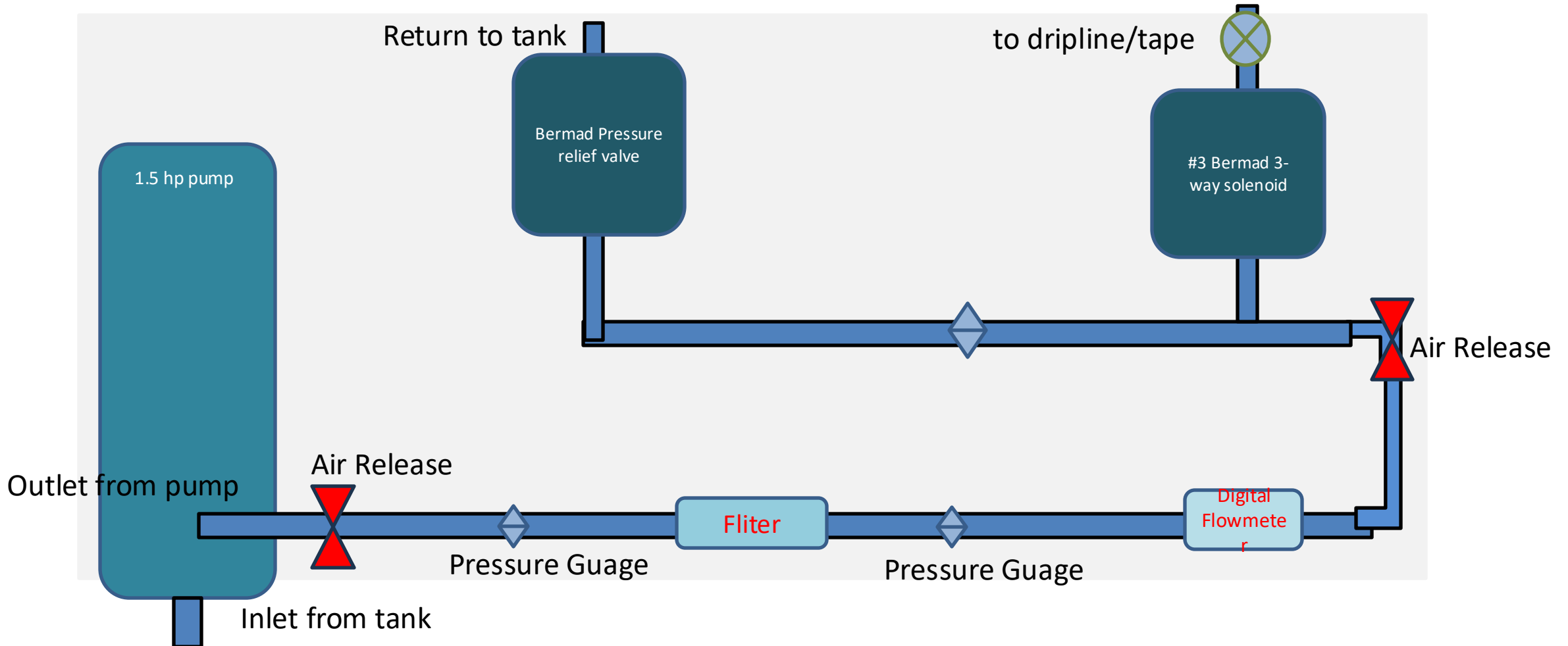
Requires approximately 3 ft of
water for each acre

This is a total of 300 acreft or
2,932,659 gallons

This amount of water must be
distributed evenly so every
plant gets the water it needs.

-  Check Valve
-  Transducer
-  Pressure Switch

Tabletop Model of Irrigation System



Sources of water, wells or canals



Pumps and motors



Reservoirs



Filter Station



Monitoring equipment



What is monitoring equipment? Monitoring equipment includes devices that help us check and control the irrigation system.



How does it work? These devices measure things like water flow, pressure, and soil moisture to make sure plants get the right amount of water.



Why are they important? Monitoring equipment helps us save water and keep plants healthy by providing the exact amount of water needed.

Pipes and valves



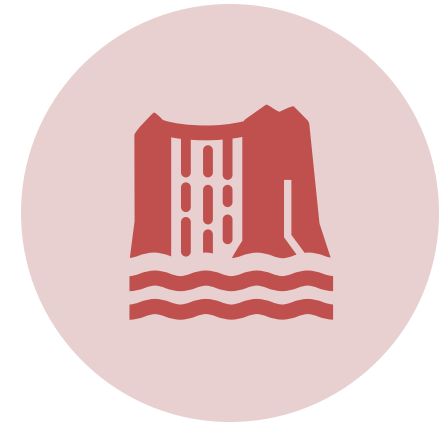
Lines and sprinklers



EVEN WATER DISTRIBUTION: LINES AND SPRINKLERS ENSURE THAT ALL PARTS OF THE GARDEN RECEIVE WATER.

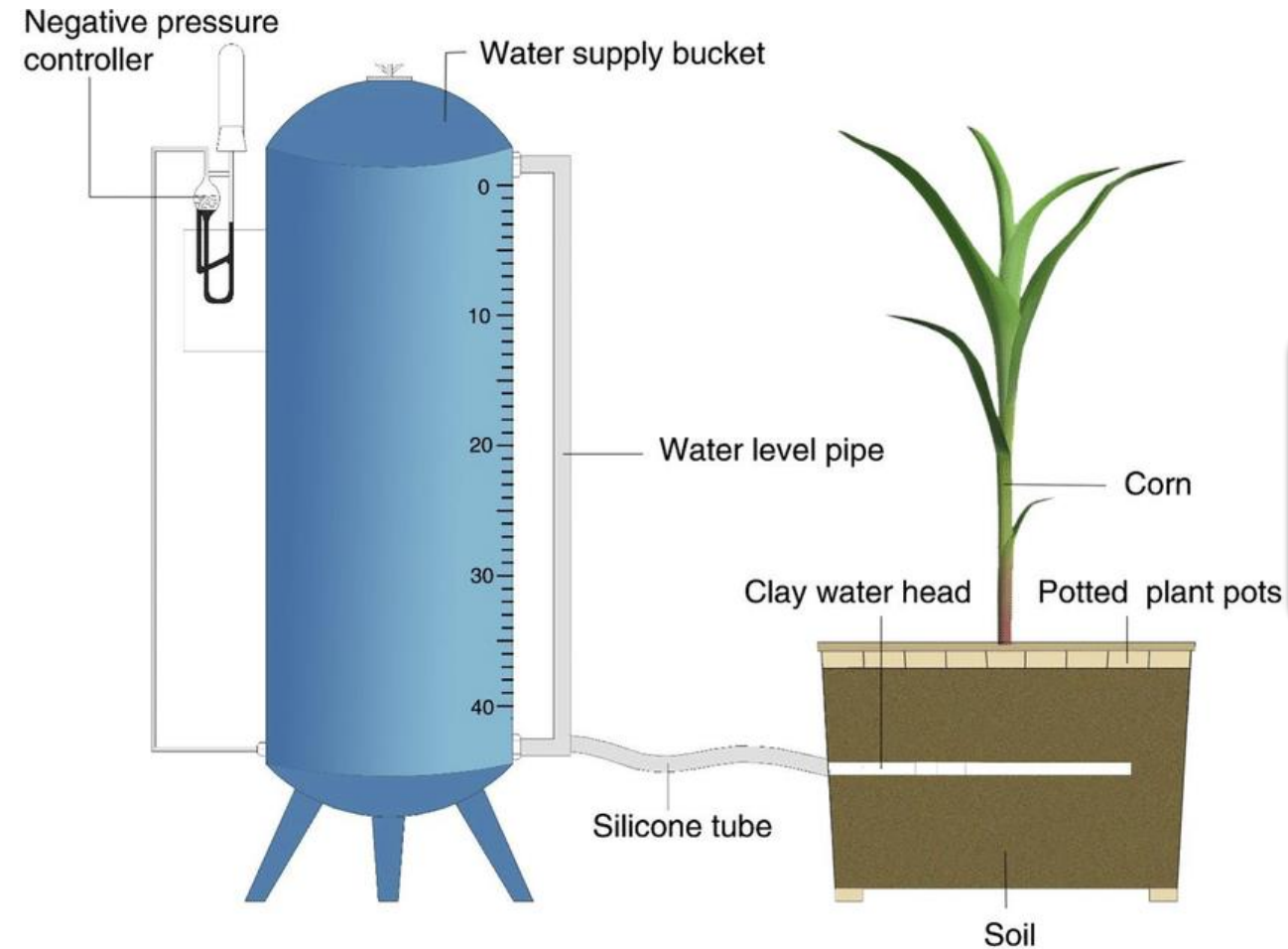


EFFICIENT WATERING: SPRINKLERS CAN WATER MANY PLANTS AT ONCE, SAVING TIME AND EFFORT.



VERSATILITY: SPRINKLERS CAN BE ADJUSTED TO WATER DIFFERENT AREAS, MAKING THEM USEFUL FOR VARIOUS GARDEN SIZES AND SHAPES.

Maintaining pressure needed



Pressure is the force that pushes water through pipes and hoses.

Think of it like blowing up a balloon—the more air you blow in, the harder it pushes out!

Operation of Irrigation Model (Tim)