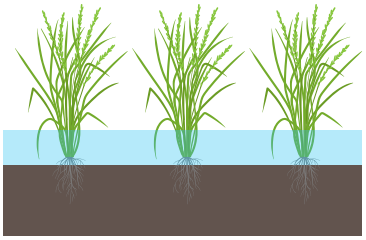
Common Irrigation Methods in the US

Gravity Irrigation

With gravity irrigation systems, water is pumped or released onto the field and flows on its own among the crops. These systems require the least investment in equipment and maintenance, but they use the most water of the three types of systems. Inconsistent water delivery can result in yield loss and/or runoff.



Flood

Water is released and flows freely throughout the field

Furrow

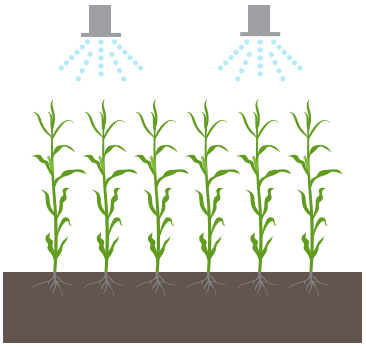
Water flows through trenches that are dug in rows between plants

Contour

Water flows through trenches that are designed for farming on a slope

Sprinkler Irrigation

With sprinkler irrigation systems, pressurized water is applied directly above crops through pipes and/or nozzles. Sprinkler systems apply less water than gravity irrigation and allow farmers to tailor water and fertilizer delivery to crop needs. Center pivots and traveling guns can be used on a variety of terrains, although they may have difficulty with large slopes and are susceptible to wind damage.



Center Pivot

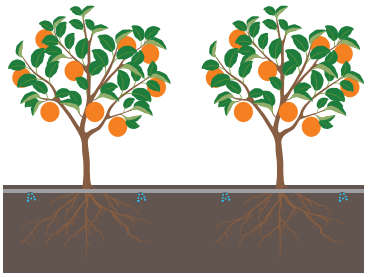
A long span of pipe with nozzles uses a motor and wheels to pivot around a central tower

Rain Gun

Pressurized water showers out of one rotating nozzle

Micro Irrigation

With micro irrigation systems, water is applied directly to the roots of the crops using precise applicators. Micro irrigation systems are expensive, but apply less water and allow high-precision application of water and fertilizer. They can be difficult to use on operations that use large, heavy equipment such as tractors and combines.



Surface Drip

Pipes lay on or above the ground to supply water to the base of the crops

Subsurface Drip

Pipes are buried in the soil to supply water directly to the root zone of the crops

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