

Solar Powered Irrigation System (SPIS)

How to use your water in a sustainable way

How to estimate how much water you'll need



Crop type

Different crops need different amounts of water.



Area Climate

Arid, dry areas need more water
Wet, mountain areas need less water.



Soil Type

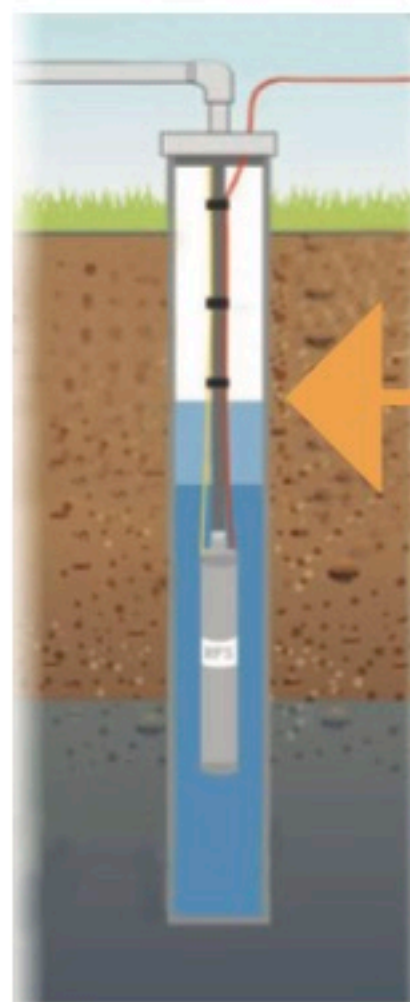
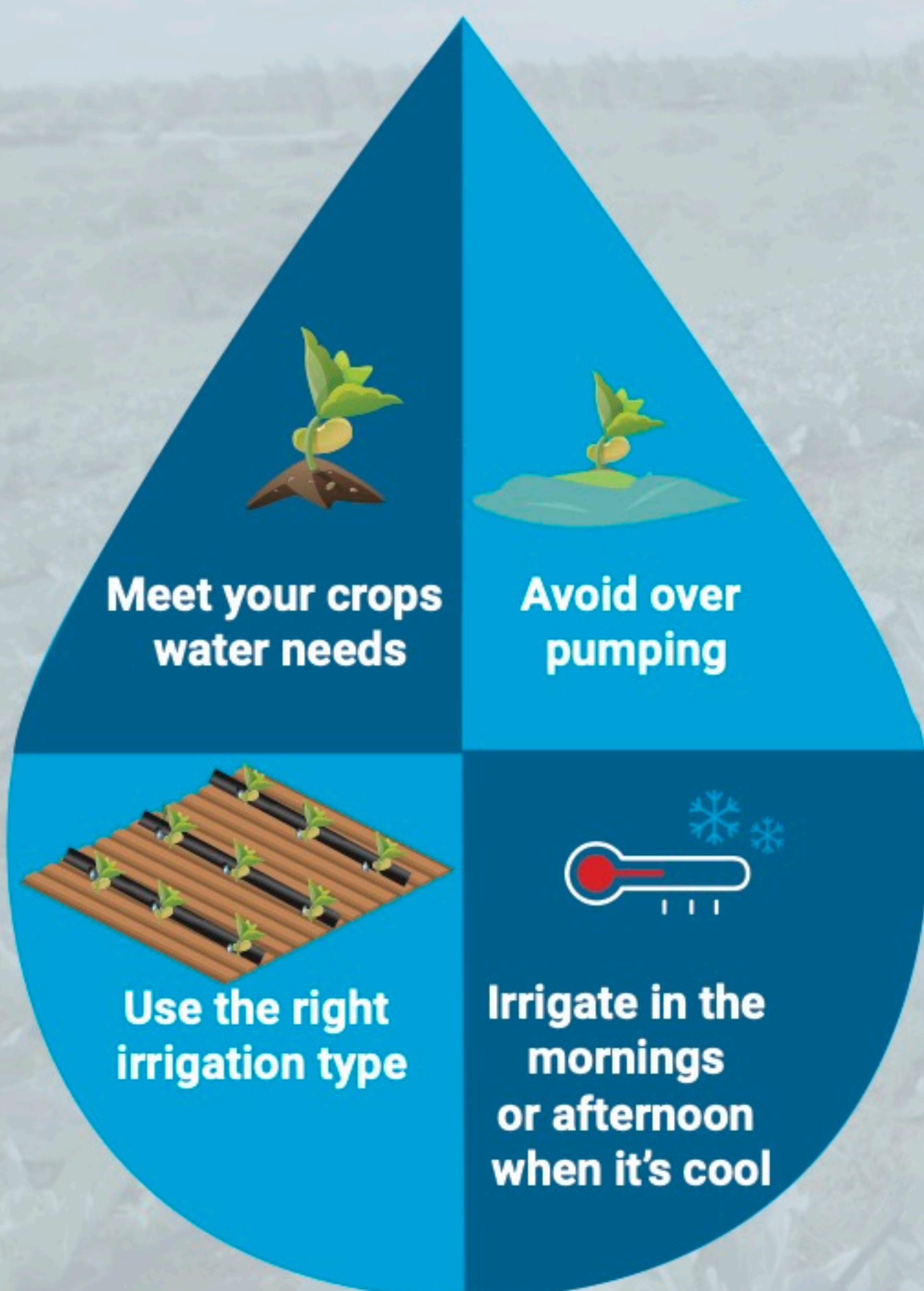
Light, sandy soils- irrigate often, using little water
Heavy, clay soils- irrigate less often, using much water.



Irrigation Type

A sprinkler? or a drip line? Irrigation types have different pros and cons.

Use your water in a sustainable way!



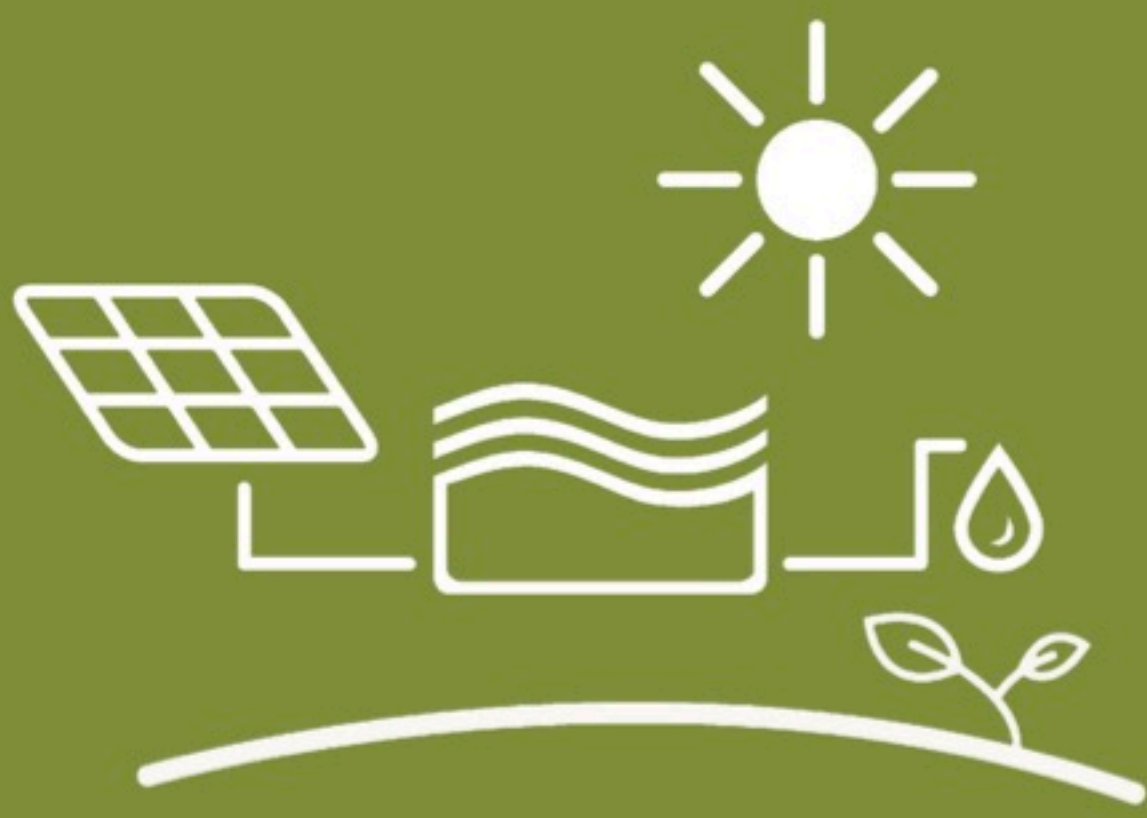
How to monitor your water refreshment rate!

The day after pumping check that your water level in well or reservoir is the same as the previous day. If not, you are using water faster than it can recharge.

Call in an expert to advise you!

These are signs that you are over-pumping:

- ⚠ Your water source runs dry
- ⚠ Plants close to your water source start to wilt or hang
- ⚠ Soil starts to show white salt crusts
- ⚠ Your neighbours run out of water
- ⚠ Trees and shrubs close to the water source start to die



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How to maintain your Solar Powered Irrigation System

Keeping your SPIS clean and free from damage means you can use it for long!



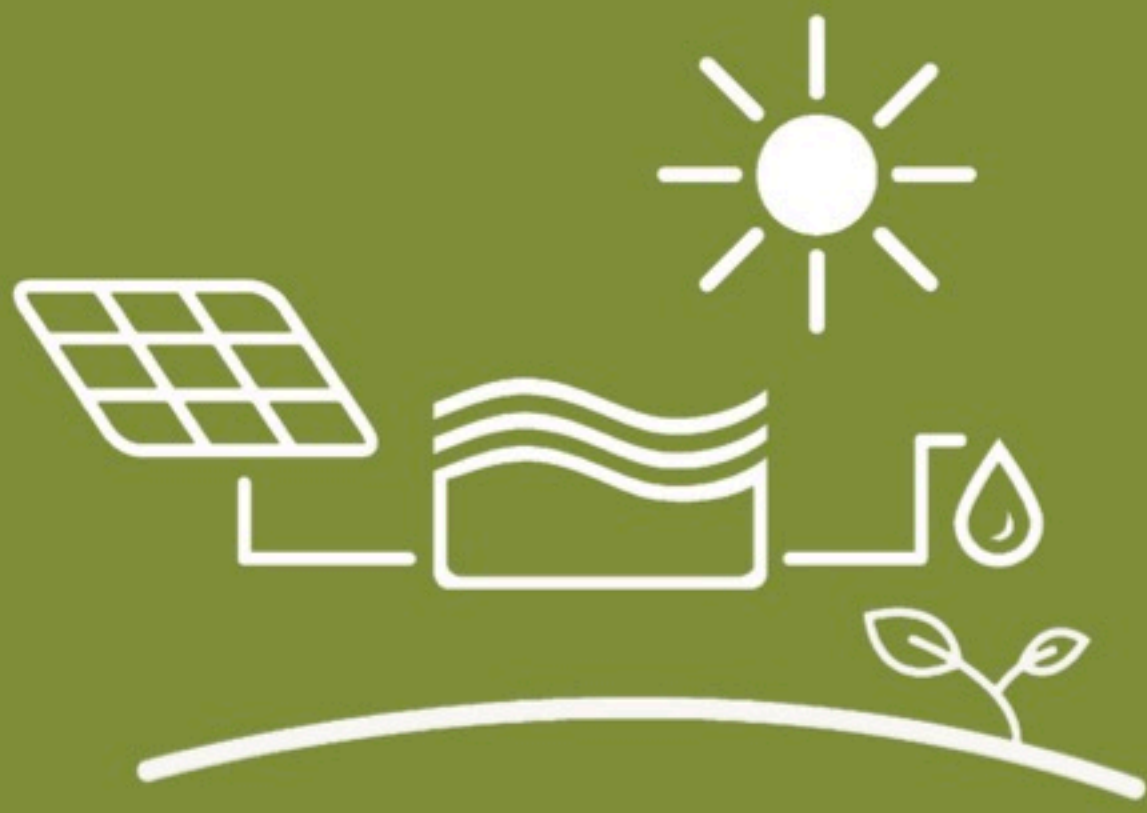
What can you do yourself?

- ✓ Clean the panels when dirty or dusty
- ✓ Cut away any plants blocking the sun from the panels
- ✓ Check cleanliness of water coming out of the tank visually and clean or replace the filter if necessary
- ✓ **Monthly:** Clean or flush the tank to ensure water is clean
- ✓ **Weekly:** Check the system for leaks, corrosion, damages, dust or insects



When to call in a technician

- ➔ Leaks in the pipes or the tank
- ➔ Open wires in the system
- ➔ The pump runs dry
- ➔ The pump has strange noises and vibrations
- ➔ Water is not released evenly across the field
- ➔ Controller shows flashing diodes indicating an error




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How to go about getting the system

Invite an expert to help find the right SPIS for you- they will check:

 **What's your water source?**
Is it ground water or surface water?

 **How deep down is the water?**
Do you need a surface pump or a submersible pump?

 **How much water will you need every day?**

Based on this, they will suggest the best pump for you

 **The SPIS uses energy from the sun- that's free! But, it will need some investment**

DID YOU KNOW?



The setting up of an SPIS on 1 acre can cost between

\$1,000 and \$5,000

How can I finance an SPIS?

Save up money

Get financing from your farmers group, or a bank

Find a supplier that will allow you to pay in installments



Components of the system



The Solar Panel



The Controller



The Solar Pump



The Tank



The Pipes



Irrigation outlet

How it works

- **The sun shines on solar panel and creates electricity**
- **The electricity powers the pump which pushes water to the tank or directly to the field**