



Revolutionary Irrigation  
Technology to Mitigate  
Climate Change Hazards





**70%**

of annual water withdrawals  
goes to **Agriculture**



**85%**

of global irrigation is carried  
out by wasteful **flood**



**Sustainable farming is a global necessity**

# Flood Irrigation is No Longer Sustainable



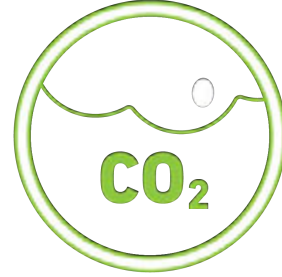
Water  
Waste



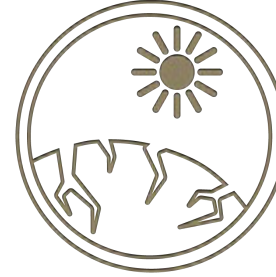
Lower  
Yield



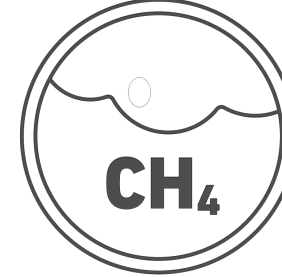
Fertilizer  
Overuse



Greenhouse  
Gases



Soil  
Erosion



Methane



Hard  
Labor



# N-Drip Transforms Flood to Gravity-Powered Micro-Irrigation

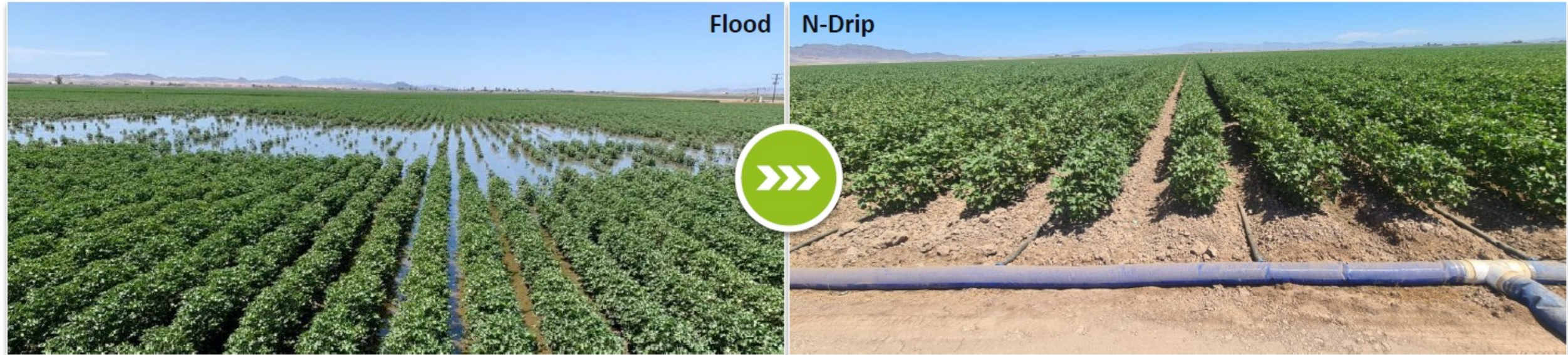


# N-Drip – The only sustainable solution to save significant amount of water


✔ Uses existing flood infrastructure

✔ Efficiently irrigate based on gravity power alone

✔ Operates with natural water without expensive filtration



*Resource efficiency*



**Up to 70%**  
Water saving

6 SDG 6


*Higher food security*



**Up to 45%**  
Yield increase

1 SDG 1, 2 SDG 2

*Reduce CO<sub>2</sub> footprint*



**Up to 71%**  
CO<sub>2</sub> reduction

13 SDG 13

*Soil conservation*



**Up to 50%**  
Fertilizer usage reduction

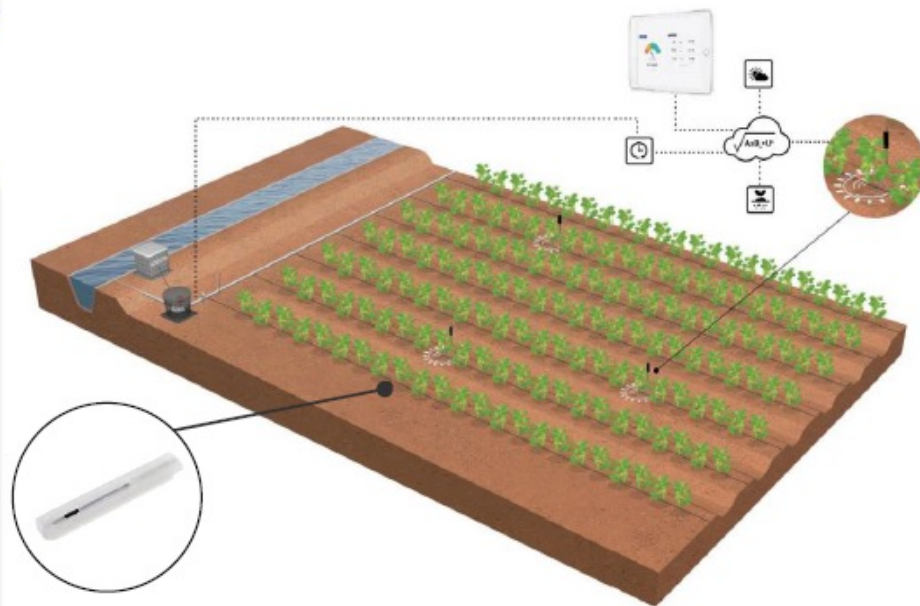
15 SDG 15

# Precise irrigation powered by gravity alone, backed by reliable data

## N-Drip gravity powered irrigation

- ✓ Existing infrastructure
- ✓ No pumps
- ✓ No filters

- ✓ Patented gravity-based technology / no external energy required
- ✓ Saves water use and manages water flow
- ✓ Reduces CO<sub>2</sub> and methane emissions relative to flood irrigation
- ✓ Maximizes yield potential
- ✓ Reduces fertilizer use
- ✓ Protects soil fertility and reduces land depletion
- ✓ Composed of 100% recyclable materials



## N-Drip Connect

- ✓ Monitor
- ✓ Act
- ✓ Optimize

- ✓ Game-changing sensor and data analytics technology – more accurate and reliable
- ✓ Offers crop and soil-specific irrigation and fertilization recommendations
- ✓ Simple, easy-to-use application
- ✓ Full service supported by teams of agronomist

Combined solution of efficient irrigation and agronomic decision support system to achieve optimal value for growers while directly contributing to UN SDGs

# A Picture is Worth 1,000 Words...

## Simple and affordable infrastructure vs. pressurized drip

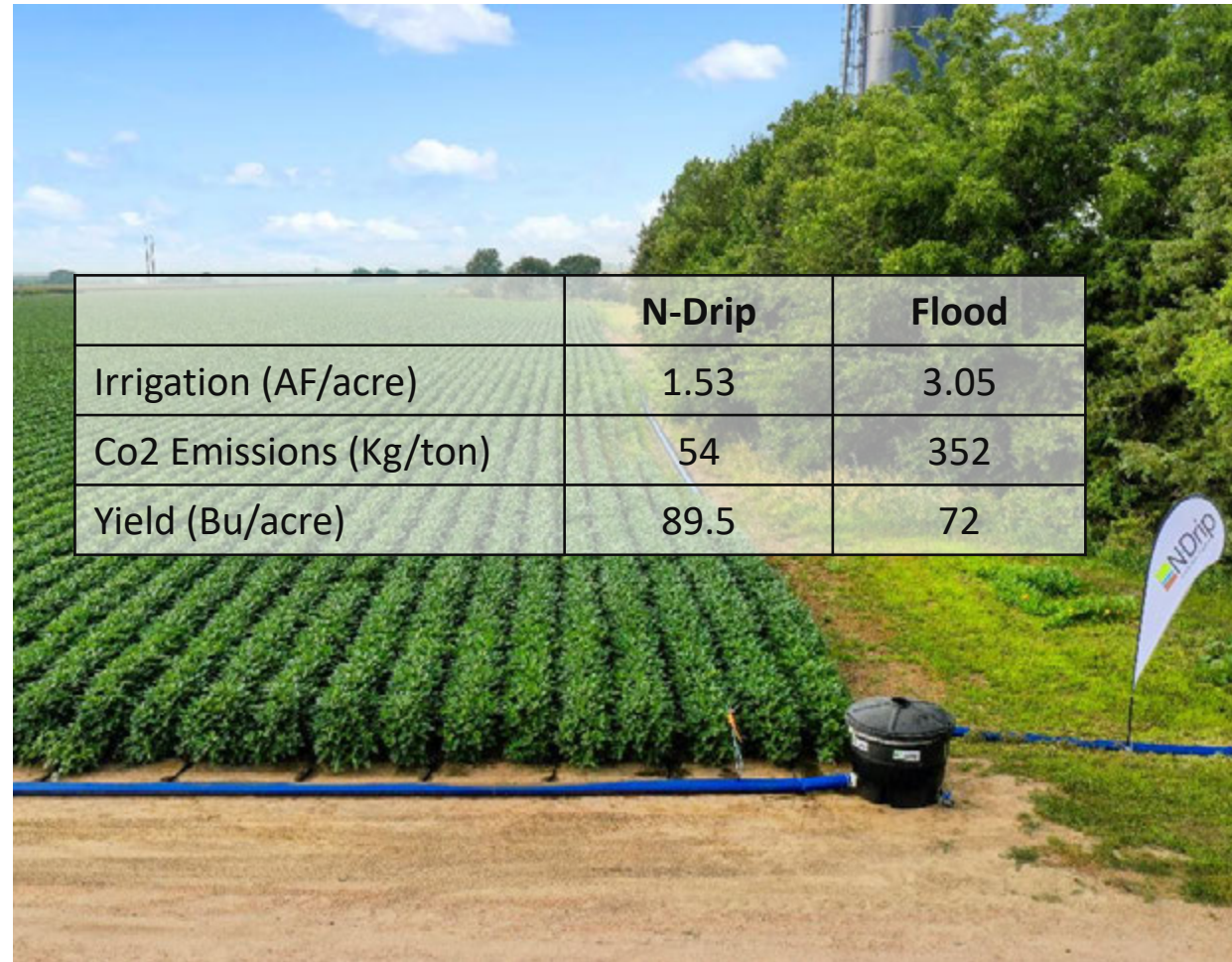


**High-pressure Drip**  
**<\$2,000 per acre\***  
Equipment:  
filters, pumps, valves



**N-Drip**  
**>\$500 per acre**  
Equipment:  
water tank, valves

## Higher yield vs. flood, using 50% less water



	N-Drip	Flood
Irrigation (AF/acre)	1.53	3.05
Co2 Emissions (Kg/ton)	54	352
Yield (Bu/acre)	89.5	72

\*Not including cost of energy

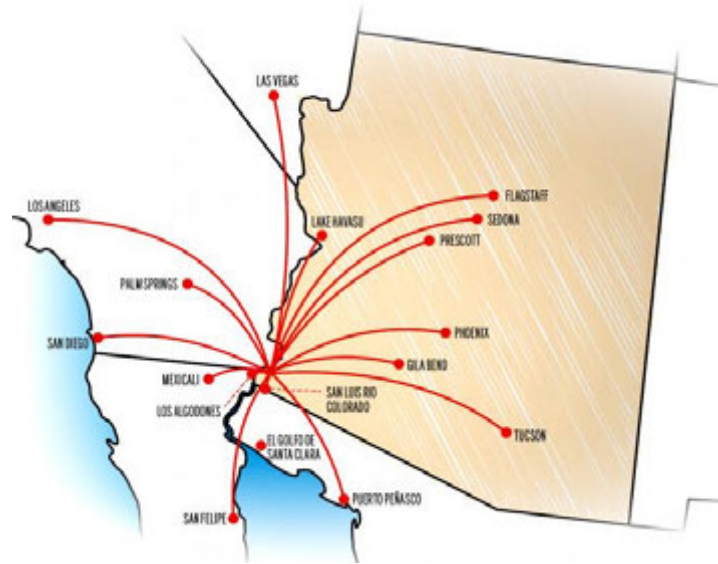
# Environmental ID - Generated by N-Drip Connect

## Case study: Reducing the carbon footprint in Potato

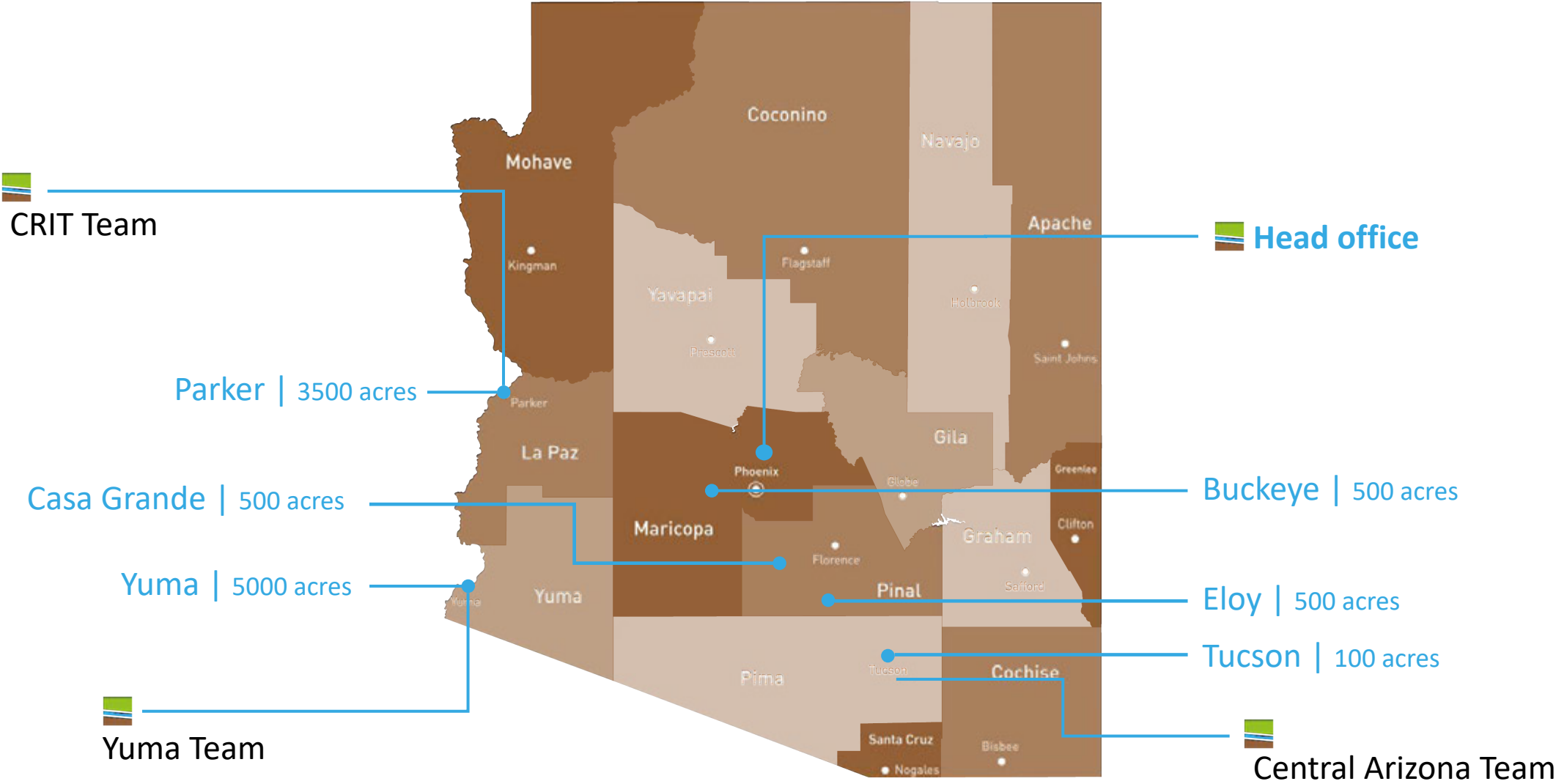
	Units	Kg potato	Per acre	
Emissions	Kg CO <sub>2</sub> eq	0.364	872	<p>0.5 is the global average based on research published by <i>Poore &amp; Nemecek (2018) - Reducing food's environmental impacts through producers and consumers</i></p>
	Kg N <sub>2</sub> O	0.34	1.3	<p>0.1 is the global average based on research published <i>Arezoo Taghizadeh-Toos et.al. (2019) - Regulation of N<sub>2</sub>O emissions from acid organic soil drained for agriculture</i></p>
Water Footprint	Liter	95	2,280,000	<p>287 is the global average based on research made by <i>Institution of Mechanical Engineers published by The Guardian (2013) - How much water is needed to produce food and how much do we waste?</i></p>
Nitrogen Input	Kg N	0.005	108	<p>0.005 is the global average based on research published by <i>Magdalena Pierer et.al. (2014) - The nitrogen footprint of food products and general consumption patterns in Austria</i></p>
Nitrogen Leaching	Kg N	<0.001	0.2	<p>0.005 represent the actual amount of Nitrogen input in soil</p>



# Arizona is Home For N-Drip in North America



# N-Drip in Arizona



# Arizona - Installations & Results



- Over 1,500 acres installed



- Alfalfa fields showing 49% water savings more than 3 acre-feet per acre


# Business Models Responsive to Market Opportunity



## Emerging Water Shortage Driver\*

1. Water savings sales:
  - Water savings solutions to water utilities
  - Offsetting water savings
  - Public grants-based sales

## Sustainable Supply Chain Driver

1. Strategic partnership with 
2. Partnership with Consumer Products Goods corporates (CPGs)
3. Harnessing impact-oriented financial institutions

- Irrigation distributors
- Direct sales to growers



**Thank You!**  
**Come N-Drip with Us!**