

AWARD-WINNING

2020  
U.S. Dairy  
Sustainability  
Award for  
**Outstanding  
Community  
Impact**



# SDI-E

Subsurface Drip Irrigation  
For Dairy Effluent Water  
Application

# TURNING WASTE INTO VALUE

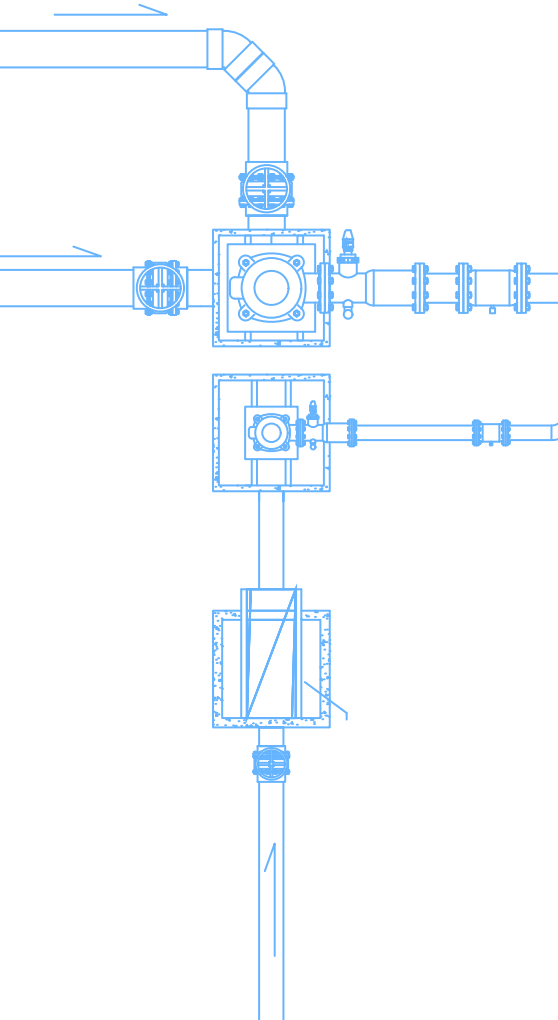
A Circular Economy Model  
Driving Sustainability in  
Dairy Manure Management

SUSTAINABLE  
MANURE  
MANAGEMENT  
SOLUTION



# SDI-E

An innovative subsurface drip system that utilizes advanced filtration and proprietary, patent-pending technology developed by Netafim to blend dairy wastewater with fresh water enabling consistent and reliable application of dairy effluent as a nutrient-rich fertilizer. This process not only re-uses water, but also recycles manure as a natural crop nutrient and soil builder, reducing the need for commercial fertilizer.



To learn more about SDI-E, visit [netafimusa.com/effluent](http://netafimusa.com/effluent).

## Turning Waste Into Value **BENEFITS**

- ↑ Increased crop uniformity and yields

With SDI, water and nutrients are used more efficiently reducing input costs, producing a more uniform crop and higher yields.
- ↑ Increased water use efficiency

Water loss through evaporation, runoff and deep percolation are virtually eliminated.
- ↓ Reduced need for scarce water resources

Allows Dairy Farmers the ability to weather extreme drought
- ↓ Reduced risk of polluting water bodies

Reduced nutrient use avoids polluting water supplies
- ↓ Reduced need for synthetic fertilizer

Dairy Farmers save by utilizing the already available organic on-farm nutrients.
- ↓ Reduced greenhouse gas emissions

Studies show approximately 70-90% fewer greenhouse gases were released, when dairy effluent water was applied through an SDI system.

**Project Partners**

# MAKING AN IMPACT



**DE JAGER  
DAIRY**

**MCREE  
DAIRY**

## Precision Blending Control System

# TECHNOLOGY

(US Patent No. 10143130)

Netafim's patented system precisely blends the right ratio of effluent and fresh water for maximum nutrient uptake reducing the need for synthetic fertilizers to grow feed crops. Unique system features of our SDI-E system include:



Electronically Actuated Valve



Controller with EC Capable Logic



Doubled Filtration Capacity



2 VFD Pumps

## Key Factors

# SUCCESS

**5 Cows to 1 Acre Ratio** for effective nutrient management

The use of **two lagoons or settling ponds** to help filter the effluent water

**Netafim's patented blending controls** for fresh/effluent water blending

The use of **sprinklers or flood irrigation for germination** then transition to SDI

Optimized and **engineered effluent water intake**

Operations focus on **dripline maintenance**

## Pilot Results

# SUMMARY



### YIELD

Tons Yield/Acre

**2.57%**



### WATER USE EFFICIENCY

Tons Yield/Acre/Inch of Water

**38.13%**

### WATER APPLIED

Inch of Water Per Acre

**-35.16%**



### NITROGEN USE EFFICIENCY

Tons Yield/Acre/lbs of Nitrogen

**47.22%**

### NITROGEN APPLIED

lbs N Applied Per Acre

**-44.78%**

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## Funding

# SOLUTIONS

### EQUIP NRCS

Contact your local NRCS office for an application.

### SWEEP CFDA

Contact your local CFDA office for an application.

### NETAFIM FINANCIAL SOLUTIONS

Visit [netafimusa.com/financial-solutions](http://netafimusa.com/financial-solutions)

## System Design

# INSTALLATION

For system design your **Authorized Netafim Digital Farming Dealer**, versed in the local aspects of crop irrigation with SDI, will help determine what system configuration is best.



