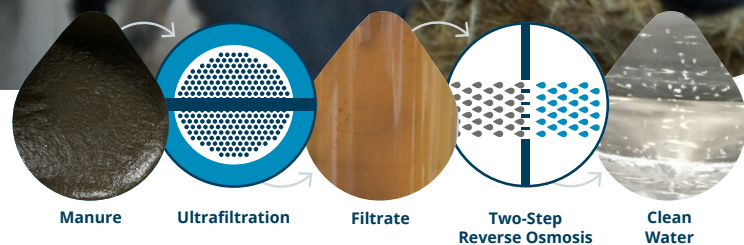




# MANURE FILTRATION



## OUR SOLUTIONS

### Benefits & Impacts

*Reduce manure handling costs, concentrate nutrients, and reclaim clean water for reuse or discharge.*

#### ULTRAFILTRATION (UF)

- Recover 65-85% of manure as a transparent filtrate free of pathogens and suspended solids with very low levels of phosphorus and organic nitrogen
- Filtrate is ideal for high-volume application to fields and will not clog irrigation systems
- Concentrate is a phosphorus-rich slurry that can be cost-effectively transported to fields further away or used to produce value-added composts and fertilizers

#### TWO-STEP REVERSE OSMOSIS (TSRO)<sup>TM</sup>

- UF filtrate is converted into clean water for reuse or discharge and a concentrated liquid fertilizer
- Water reclamation reduces manure hauling, spreading, and lagoon storage requirements while decreasing freshwater consumption

## FACILITY BENEFITS



Create low-phosphorus liquid and concentrated fertilizer



Capture phosphorus and carbon credits through improved management



Reduce manure hauling and spreading costs while optimizing nutrient application and uptake



Use pathogen-free and solids-free filtrate for sand washing or flushing

## HOW IT WORKS

### Technology & Performance

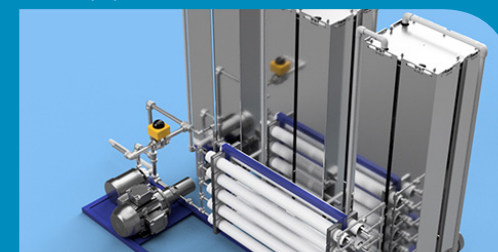
#### ULTRAFILTRATION

- Proven, polymer-free technology with demonstrated results at commercial dairy farm
- Robust design handles high temperatures, high solids, high viscosities, and extremes in pH
- Designed to last 10-15 years in challenging applications with little downtime, maintenance, or repair
- Cleans quickly and automatically using standard cleaning solutions
- Can operate in batch or continuous modes and be mounted horizontally or vertically

#### TWO-STEP REVERSE OSMOSIS

- Proven membrane technology with demonstrated results at commercial dairy farm
- Reduces volume of UF filtrate by 65-90%
- Highly reliable, non-biological, and polymer-free solution to purify UF filtrate
- Produces clean water ready for reuse or discharge and a value-added product high in ammonia nitrogen and potassium
- Highly automated design requires minimal operator attention

UF Equipment TSRO Equipment





# OUR SOLUTIONS WORK

**96%**

of phosphorus concentrated into 25% of manure's volume

**38%**

of nitrogen concentrated into 25% of manure's volume

**50-60%**

of manure volume reclaimed as clean water

Contact us today for a quote  
**844.934.4378**

## We will help you

- Reduce Manure Handling Costs
- Enable Increased Production
- Reclaim Water



### EXPLORING Filtration

Call to learn how a Manure Filtration System can help your farm. We will assess your current situation and recommend the best solution for you.



### TESTING Filtration

We will pilot test your manure at our facility in Michigan and provide a thorough report and proposal for a full-scale system.



### IMPLEMENTING Filtration

We deliver, install, and commission your new filtration system and teach employees how it works, ensuring it meets your expectations.



### MAINTAINING Filtration

The filtration system will become an integral part of your facility and allows you to streamline and expand your operations, reduce water use, and use or sell a concentrated fertilizer product.

## MANURE FILTRATION RESULTS

PARAMETER	UNITS	MANURE	UF FILTRATE	UF CONC.	TSRO CONC.
Dry Matter	%	4.21	1.95	9	3.76
Total Nitrogen	lbs / 1000 gal	26.9	16.7	45.6	10.5
Phosphorus (P2O5)	lbs / 1000 gal	26.9	0.3	21.1	0.4
Potassium (K2O)	lbs / 1000 gal	19.5	20.6	21.1	15.1

Data from filtering digested dairy manure after screw-pressing.

## JUST ASK OUR CUSTOMERS...

- Digested Organic's solution is the right fit for our farm, allowing us to concentrate key nutrients for our crops into substantially less volume at a competitive operating cost—that means getting manure trucks off the road and reduced hauling costs. We also like the fact that it's highly automated, has a small footprint and is environmentally sustainable—something that is important to us and to our community.



- **Dean Strauss**

Owner of Majestic Crossing Dairy