



Technology/Service: Beddingmaster

Information by: Steve Pearce

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COMPANY INFORMATION

Company Name: DariTech, Inc.

Phone: 360-354-6900

Web Site: www.daritech.com

Address: 8540 Benson Rd

State: WA

City: Lynden

Zip Code: 98264

TECHNICAL CONTACT

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City: Lynden

State: WA

Zip Code: 98264

DEMONSTRATION SITE CONTACT

Site Name:

Contact:

Title:

Phone:

Email:

Address:

City:

State:

Zip Code:

INITIAL TECHNOLOGY OVERVIEW

This information is to guide in the development of a more specific and detailed Technology Information Request. Please answer the following questions for each Technology or Service provided.

What is the name of the technology or service you provide?

BeddingMaster rotary fiber bedding recovery drum

Describe how this technology is used in a larger Nutrient Management System. Please be as detailed as possible.

Recovers manure fiber for bedding by using aerobic bacteria present in manure to heat treat manure fibers, killing pathogens and reducing regrowth potential when fresh manure is tracked into the stalls.

How many systems do you have installed on dairy farms or other livestock operations?

	Number of Sites	Size of Installations
Dairy	130+	150-8,000 cows
Pork		
Poultry		

Do you have a preferred region or area for the location of projects?

Works well anywhere. Primary demand is in wet or cold climates where composting outside is not practical

Location of farm(s)?

Throughout North America and Europe

What's the smallest and largest farm using your system?

150-8,000

Input and output of your unit/system – do you have a mass balance analysis?

If a mass balance is available, please attach or include as a separate document.

Input material description/characteristics:

For example: raw manure, digestate, screened digestate, suitable non-farm feedstocks, other.

Raw or digested liquid manure is separated, with fiber used to make the bedding

Does the technology treat the full manure stream for a farm or a fraction of the stream?

Typically the whole manure stream. Because one cow's worth of manure typically beds 1.5-2 stalls, some installations only process as much as is needed for bedding

Do you consider this a mature system or ongoing farm development?

Mature, has been in service since 2008

Any weather constraints? Yes No *Please describe.*

Any bedding constraints? Yes No *Please describe.*

Not for sand bedded dairies unless there is a separate manure stream from heifers on fiber bedding

Output materials description and characteristics:

Please include the % of the total stream for each material, i.e. 10% fiber and 90% screened liquid by weight.

All separated fiber is treated. Overall ratio of solids/liquid effluent dependent on starting moisture percentage of liquid manure

Do the Outputs of the process have a resale market identified? Yes No

If so under what brand name or who is the contract with?

Is this process scalable and to what extent (top and bottom limits)? *Please describe.*

Scalable from as small as 100 cows. Modular system, multiple 8-40 units used over 2,000 cows

Do you have a known scaling factor? *Please describe.*

Does this technology require any air input? Yes No

What is the preferred air connection? *For example: psi, fitting size, air quality.
If not distributed by the system please list each connected device.*

Ambient air is pulled through the drum by DT supplied 1hp blower

Does this technology require any water input? Yes No *If so, please describe.*

What is the preferred water connection? *For example: psi, fitting size, water quality, gpm.
If not distributed by the system please list each connected device.*

Does this technology require any electrical input? Yes No *If so, please describe.*

Drum HP based on size, 5-15hp. Separators 7.5 hp each, infeed auger and blower 1 hp each.

What is the preferred electrical connection? *For example: phase #, voltage, full load amps.
If not distributed by the system, please list each connected device.*

3phase preferred, single phase possible

Does this technology require any mechanical input? Yes No *If so, please describe.*

What is the preferred mechanical connection? *For example: horsepower, connection, rpms.
If not distributed by the system please list each connected device.*

Does this technology require any special plumbing? Yes No *Please describe what is required.*

Does this system require and special foundations or pads? Yes No *If so, please describe.*

Simple footing under drum

Do you consider this technology part of a larger system that you provide? Yes No *If so, please describe.*

We provide complete manure systems for dairies regardless of flush/scrape or type of bedding. would fit into any fiber bedded system,

Does your system require any other components that you do not provide or are not included in your proposal?

Yes No *If so, please describe.*

How is the system delivered to the site? *For example: skid mounted, assembled on site, constructed on site.*

Skid mounted, unloaded off truck and wired on site

Is this system portable or configured in such a way that it could be easily transported for use in several locations?

Yes No *Please describe.*

Possible, but not necessarily practical for mobile use

Has your technology been accepted by the NRCS and is it included into a practice standard? Yes No

Describe if necessary.

Are there any unusable or hazardous byproducts of this process? Yes No

If so, please describe the product and recommended means of disposal.

What spare parts and redundant components are included with the system?

Spare parts are always on dealer shelf. Typically related to the separator

How is the system controlled and what are the components and capabilities of the control system?

DT Automation ETL listed PLC control panel with remote access with PC or smartphone

What is the usable life of the system?

Depends on maintenance practices at the dairy, there has never been one that has worn out beyond repair

What is the salvage value at the end of the usable life?

N/A

What is the educational and technical level of competence for the operation of the system?

Farm hand

What level of maintenance is required for the system?

Please indicate if rebuilds or major components must be replaced and what the frequency is for these components.

Primarily grease on a regular schedule for the drum. Screens and augers periodically for separator, standard for screw press operations

Are consumables used in the process? Yes No

Please provide the nature and purchase relationship for these consumables. For example: proprietary, special contract, generally available.

Which of these NRCS codes would your technology be classified under? Check all that apply. Add if necessary.

CODE	NRCS DESCRIPTION	APPLIES
472	Access Control	
560	Access Road	
309	Agrichemical Handling	
371	Air Filtration and Scrubbing	
591	Amendments for the Treatment of Agricultural Waste	
366	Anaerobic Digester	
672	Building Envelope Improvement	
372	Combustion System Improvement	
317	Composting Facility	✓
554	Drainage Water Management	
375	Dust Control from Animal Activity on Open Lot Surfaces	
373	Dust Control on Unpaved Roads and Surfaces	
374	Farmstead Energy Improvement	
512	Forage and Biomass Planting	
561	Heavy Use Area Protection	
516	Livestock Pipeline	
590	Nutrient Management	
521A	Pond Sealing or Lining, Flexible Membrane	
533	Pumping Plant	
558	Roof Runoff Structure	
367	Roofs and Covers	
318	Short-Term Storage of Animal Waste and By-Products	
570	Stormwater Runoff Control	
606	Subsurface Drain	
635	Vegetated Treatment Area	
601	Vegetative Barrier	
360	Waste Facility Closure	
632	Waste Separation Facility	✓
313	Waste Storage Facility	
634	Waste Transfer	
629	Waste Treatment	✓
359	Waste Treatment Lagoon	

Can you provide an estimate of the capital required for the installation of this technology?

Please include all components and designate if provided by you or others.

From \$150,000 to \$350,000+, dependent on size or number of units

Can you provide an estimate of the operational costs required for this technology?

Please include all costs and designate if provided by you or others.

\$300-\$2,000/month electricity, dependent on size of operation
\$2,000- \$10,000/year for screw press maintenance

Is there financing available for this system? Yes No *If so, what are the conditions for this financing?*

Is the system available for lease? Yes No *Please describe.*

What sort of warrantee or guarantee do you provide with this technology?

Do you provide any performance guarantees or strictly defects in parts and materials?

1 year parts and materials

Explain how this system is unique or transformative and how does it improve upon or go beyond other technologies that are currently available.

Allows for total control of bedding operation in any climate, as opposed to windrow compost operations which are subject to changes in weather or seasons. Patented drum design is most cost efficient drum system on market.

Would you be willing to provide a location for a site visit by Newtrient? Yes No

If so, please provide location.

Pacific Northwest, Wisconsin, Michigan, New York, Pennsylvania, Canada, others

Technology References. Please provide customers with whom we can discuss this technology and its performance.
Include a company name, location, contact name and contact information.

Reference 1

Company Name:	Not authorized to publish customer contact info, please call on case by case basis
Company Location:	
Contact Name:	
Contact Information:	

Reference 2

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Reference 3

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Reference 4

Company Name:	
Company Location:	
Contact Name:	
Contact Information:	

Are there any other facts about this technology that you feel should be included in this document?