TECHNOLOGY PROVIDER
TECHNOLOGY INFORMATION REQUEST

Technology/Service:	DODA - Screw Press Separators		
Information by:	Ethan Curry	**Date:**	August 22, 2018

COMPANY INFORMATION

Company:	Doda U.S.A. Inc.		
Phone:	507.375.5577	**Web Site:**	https://www.dodausa.com
Address:	255 16th St South	**City:**	Saint James
State:	MN	**Zip Code:**	56081

TECHNICAL CONTACT

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City:	Saint James
State:	MN
Zip Code:	56081

DEMONSTRATION SITE CONTACT

Site Name:	Provided upon request
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?

DODA Screw Press Separators

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

Doda screw press separator is an excellent machine for course solids separation from the manure slurry. It produces fiber for bedding, soil amendment and compost and used extensively on dairies across the country to reduce storage and application concerns.

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

SYSTEMS	NUMBER OF SITES	SIZE OF INSTALLATIONS
Dairy	120 Dairies in the U.S.	60 to 5,000 cows
Pork	2	2000 head
Poultry	0	0

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

The smallest unit is on a 60 cow dairy, the largest is a 5,000 cow dairy

Does this technology have a 12-month record of reliable performance on at least three dairy farms?

Yes

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

United States and Canada

Input and output of your unit/system – do you have a mass balance analysis?
If a mass balance is available, please include below or attach as a separate document.

The Doda screw separator is designed to separate manure solids from liquids and sludges using an auger rotating at 30rpm inside two wedge wire screens. The equipment controls the separated dry solids consistency up to 40%. A mass balance is available.

Input material description and characteristics:
For example: raw manure, digestate, screened digestate, suitable non-farm feedstocks, other.

Full stream of raw manure or digestate.

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

Doda screw press separators treats both the raw manure stream and digested manure. The equipment is commonly used to remove coarse solids before many other technologies to remove fine solids.

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

This is a mature technology

Any weather constraints? **Yes** ☑ **No** ☐ *If so, please describe.*

Protection from freezing in cold weather conditions.

Any bedding constraints? **Yes** ☑ **No** ☐ *If so, please describe.*

Sand bedding can increase equipment wear and maintenance costs. A sand separator should be used before the screw press separator to limit damage.

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

The output materials are 10% fiber solids and 90% liquid by weight. The separated solids are a relatively dry product in the range of 25-40% dry matter.

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?

The separated solids can be used for cow bedding and applied as manure nutrients to crops.

Is this process scalable and to what extent (top and bottom limits)? **Yes** ☑ **No** ☐ *If so, please describe.*

Do you have a known scaling factor? **Yes** ☐ **No** ☑ *If so, 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.

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

Does not require water for normal operation. Requires a source of water for equipment cleaning

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.

Standard connection

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

Heavy duty planetary gearbox powered by a local 15 HP USA high-efficiency motor

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

Standard three-phase power, 480 volt, 100 amp circuit

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.

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Does this system require any special plumbing? **Yes** ☐ **No** ☑ *If so, please describe what is required.*

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

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

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.

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

Delivered on a skid and installed 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** ☑ *If so, please describe.*

Has your technology been accepted by the NRCS and is it included into a practice standard? **Yes** ☑ **No** ☐
If so, please describe if necessary.

Manure management standard practice

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 industry standard and available through the Doda service network

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

Control panels are used to monitor and control the machinery and are custom designed to fit the client's needs.

What is the usable life of the system?

Twenty years

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

Minimal salvage value

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

Trained farm labor should be able to operate the system, including routine maintenance.

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.

Component parts require maintenance and replacement per maintenance schedule. Daily inspections and periodic response to system service warnings are required.

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	CHECK ALL THAT APPLY
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	☐
588	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.

Doda model 780 (15 HP motor) for up to 1200 cows $65,000 (this model makes up to 40% Dry Matter bedding – highest quality)

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.

For a 1,000 cow dairy, assuming 10 hours/day operation and $.10/kWh = $5,000 in annual power costs and approximately $5,000 in maintenance costs yearly

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

Equipment financing options are available.

Is the system available for lease? **Yes** ☐ **No** ☑ *If so, 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?

Twelve-month equipment warrantees are available

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

Coarse solids separation can reduce greenhouse gas (GHG) emissions and odor in the solids. There is less sedimentation in the storage lagoon resulting in less maintenance and longer operation before cleaning.

Would you be willing to provide a location for a site visit by Newtrient? **Yes** ☑ **No** ☐ *If so, please provide location.*

Upon request

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:	
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:	

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