

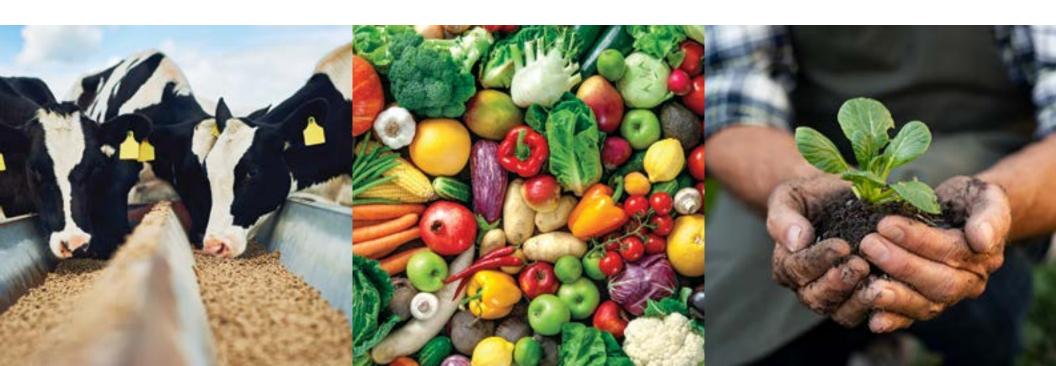
OVERVIEW: FARM & RANCH

# You make your living from your land. Whether you own or rent the parcel, it is critical for it to be as productive as possible.

To maximize your yields, your soil needs the appropriate pH levels — along with optimal levels of phosphorus, potassium, and especially nitrogen, for the crops you plan to grow.

What can you do to ensure your land is primed to deliver the maximum results? Commercial fertilizers have long been a primary answer. But now, they are not the only, or perhaps even the best, solution.

Today, you can apply biosolids, a cost-effective and proven method to meet the nitrogen needs of your land.



#### THE LOW-COST SOLUTION

Commercial fertilizers represent a significant cost to your operation. These chemical inputs make up more than one-third of the operating costs on most farms, according to the USDA. And the constantly fluctuating price of commercial fertilizers can add extra uncertainty. Anhydrous ammonia, for instance, has ranged in price from \$170 to \$700 per ton in the last six years.\* Partnering with Denali, the nation's leading full-service organic recycling company, provides you with a reliable source of low-cost organic fertilizer with a long track record of improving yields.

Denali's experts will conduct an analysis of your soil to determine the ideal agronomic rate for the crops you plan to grow. Then, Denali will deliver the biosolids to fit into your planting schedule and apply them to your land at optimal agronomic rates. Denali will also manage all the required federal and state government permitting and reporting requirements for the use of the biosolids on your land. Depending on the location, the cost of the biosolids can be significantly subsidized by the collection source, such as a municipal wastewater treatment plant, potentially providing substantial savings compared to commercial fertilizers.

\*Source: USDA Economic Research Service's monthly average fertilizer prices: 2011-2021.





#### OTHER BENEFITS

In addition to supplying optimal nitrogen levels, biosolids offer other benefits. They are effective soil conditioners, providing stable organic matter that can greatly increase a soil's water holding capacity. The organic matter in biosolids can also increase percolation and enhance soil aggregation.

And, applying the biosolids to your fields provides an environmentally friendly use for a material that would otherwise be disposed of in a landfill.

#### **HOW DOES IT WORK?**

The amount of material provided will depend on the project on your farm or ranch. Your Denali Environmental Manager will help determine the size of the project and the number of acres that can be fertilized. Once the scope has been established, Denali will use specialized application equipment to evenly distribute biosolids across the designated area. The distribution area will receive nitrogen, phosphates, potassium, calcium, magnesium, sulfur, iron and other beneficial elements. The pH of the material will usually be around 7.

In addition to the beneficial nutrients included in biosolids, Denali also tests for unwanted materials, including metals such as mercury and arsenic. Denali constantly monitors to ensure soils in the application area do not receive harmful loads of detrimental elements.

Your Denali Environmental Manager can provide complete lab reports for both your soils and the biosolids you will receive so you know exactly what's going on your land.

#### **Typical Contents of Water Treatment Plant Residuals**

Desirable Materials	lbs/6000 Gallon Load
Nitrogen	<1
Phosphate	2
Potassium	1
рН	7.0

These are typical numbers for Arkansas Water Treatment Residuals. Each water source has a unique contents profile. A Denali Environmental Manager will be able to provide a complete analysis for any material before it is land applied.

Pollutants	Parts per Million (PPM)	EPA Limits for Land Application (PPM)
Arsenic	8	75
Cadmium	<1	85
Lead	8	840
Mercury	< 1	57
Selenium	7	100

Because these metals are present in the bedrock, they will always be found in the waters of lakes, creeks, and wells. This is how they get into our water systems.



#### **ADDITIONAL SERVICES**

As a full-service organic recycler,
Denali also produces high-value
animal feed from sources ranging
from unsold fruits and vegetables
from area grocery and convenience
stores to grains used in the brewing
process. These nutritional feeds can
be used on your farm and ranch to
ensure healthy livestock. We also
manufacture biodiesel that could
be used to power farm equipment
(currently only available in Arizona
and California).

#### **WHY DENALI?**

With operations in the 48 contiguous United States plus Puerto Rico, we can easily service your farm and ranch with on-schedule deliveries of organic fertilizer.

We take our role as environmental stewards seriously with regard to recycling waste and converting it into valuable end products.

Regardless of the path the organic waste takes — feed, fertilizer, or fuel — we ensure it is managed to the highest standards, in compliance with all regulations, and is a quality product that is beneficial to your farm or ranch.



#### **WHY DENALI?**

### BY THE NUMBERS

**1,000** trucks



24 compost, mulch & soil facilities





compost partners

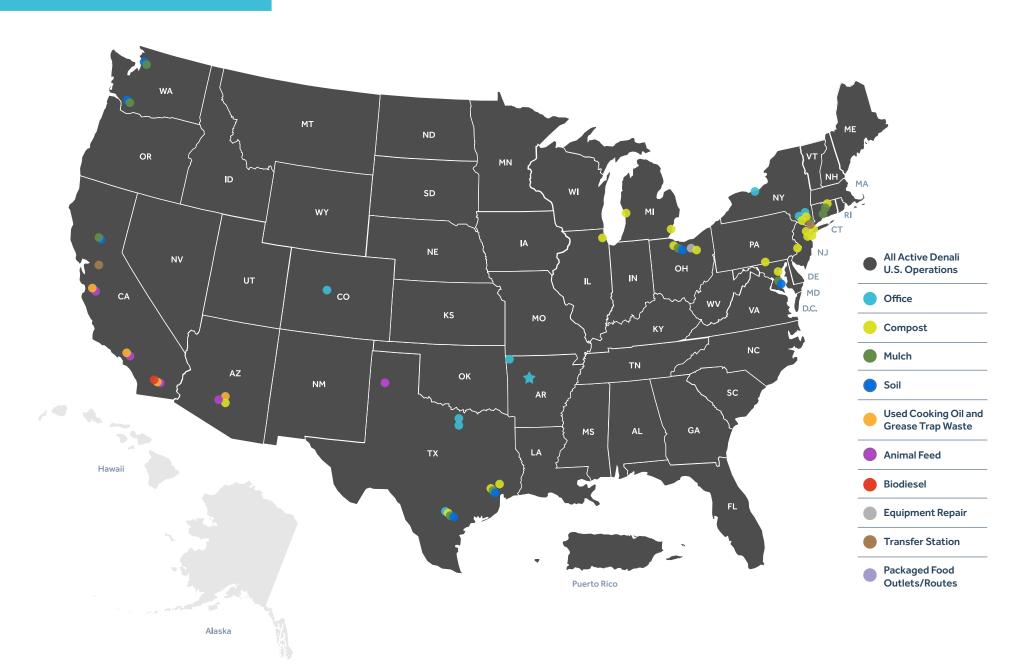


processing facilities in 14 states

5 \$\$\$ animal feed manufacturing sites

235 farms for animal feed

#### **64** Denali Locations



## DENALI

For more information, visit us at **DenaliCorp.com** or call us at 855-499-2030.

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