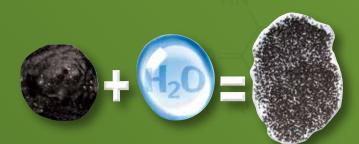
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## Introducing...

# THE NEXT GENERATION OF HUMIC ACID

DISPERSIBLE | BIOLOGICAL | SPREADABLE | BLENDABLE







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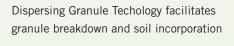
# DISPERSING GRANULE TECHNOLOGY ENHANCED HUMATE DISTRIBUTION

Upon contact with water, each Humic DG granule disperses into thousands of micro particles that move directly into the root zone and provide immediate benefits to the soil and plant.



## Humic DG FEATURES

DISPERSIBLE > BIOLOGICAL > SPREADABLE > BLENDABLE >



Contains four biologically active components; humic acid precursor, fulvic acid, humic acid and humin

Uniform, spherical granules are easy to handle and evenly applied

Ultra dry granules are engineered to be compatible with all fertilizers including urea



## WHAT IS HUMIC ACID?

Humic acid is a natural soil conditioner that acts as an organic chelator and microbial stimulator. It has a unique carbon matrix which includes a high concentration of trace minerals and organic acids. Humic acid enhances the plant's ability to take in essential nutrients and improves soil structure.

#### PROVEN HUMIC ACID BENEFITS

- Increases soil carbon
- Improves germination and viability of seeds
- Chelates macro and micro nutrients to increase availability to the plant for a longer period of time
- Increases cation exchange capacity (CEC)
- Improves soil structure for better aeration and water movement
- Stimulates beneficial microorganisms, which can improve long-term soil pH.

## DUAL CARBON SOURCES MAKE HUMIC DG UNIQUE

Humic acid precursor (plant based carbon) + Humate (Bio-organic based Carbon)

JMIC ACID RECURSOR

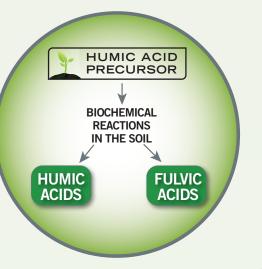
### PLANT BASED ORGANIC CARBON SOURCE

Humic acid precursor contains a soluble form of organic carbon which releases into the soil as Humic DG granules disperse. Research has shown that organic carbon holds nitrogen in the soil and binds readily with carbon based acids. This increases the amount of dissolved organic carbon in the soil water.

Through biochemical reactions, humic acid precursor is transformed into humic and fulvic acids which help chelate nutrients in the soil. This enhances plant nutrient uptake of applied fertilizers and soil nutrients.

#### **BENEFITS OF HUMIC ACID PRECURSOR**

- Increases soluble carbon in the soil
- Prevents nutrient loss by helping balance the carbon to nitrogen ratio
- Highly effective in carbon depleted soils and other sand based growing systems



#### "BIOLOGICALLY ACTIVE" COMPONENTS OF HUMIC DG

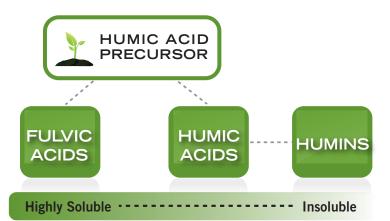
Humic DG is comprised of four biological components that range from very soluble to completely insoluble in soil media. These four components work together to provide the soil with a broad range of biological benefits, from highly soluble plant available fulvic acids to the insoluble, high nutrient holding capacity of Humin.

HUMIC ACID PRECURSOR is the highly soluble portion of Humic DG that quickly release into the soil upon contact with water. Beneficial soil microbes feed on humic acid precursor, transforming it into soluble Fulvic and Humic acids.

**FULVIC ACIDS** can be absorbed by root tissue and provide hormone–like stimulation to the plant. It also aids in the efficiency of other plant metabolic reactions.

**HUMIC ACIDS** can be insoluble or soluble. It has a high cation exchange capacity (C.E.C.) and helps chelate nutrients and stimulate soil microbes.

**HUMINS** are large, high carbon, insoluble molecules that last longest in the soil and have great nutrient holding power.





#### HUMIC DG APPLICATION RATES\*

CROPS (BROADCAST):	50 kg/ha
CROPS (IN-FURROW/BANDED):	5-12 kg/ha
TURF:	50-225 kg/ha
TREES, SHRUBS: (per tree or shrub)	60-230 g
ORNAMENTALS & BEDDING PLANTS:	5-10 g/m <sup>2</sup>
POTTING SOILS: (of potting mix)	1.5-6.0 kg/m <sup>3</sup>

\*Refer to label for complete use instructions



## ENGINEERED FOR SUPERIOR HANDLING IN THE SPREADER OR AT THE BLENDER

Humic DG utilizes patented technology to create uniform, spherical dispersing granules. Highly engineered DG granules have a low moisture content and are resistant to breakage during handling resulting in a dust free, free flowing product. Humic DG's granules are unique among dry humate products in their ability to be blended with most fertilizer components Humic DG is clean and easy to handle.

> Competitor's dry humic acid product is dusty, non uniform and contains up to 20% moisture; making it hard to spread and difficult to blend.

#### TYPICAL PHYSICAL PROPERTIES

Product	SGN	Bag Size	Bulk Density	UI	Mo Target	isture Maximum	Resistance to Attrition	Humic Acid Content (A&L Method)	Humic Acid Precursor Content	Total Humic Acid Precursor + Humic Substances	
Humic DG 100	100	20 kg	640 kg/m <sup>3</sup>	40+	7%	9%	90%	62%	10%	72%	
Humic DG	210	20 kg 1,000 kg	640 kg/m <sup>3</sup>	40+	7%	9%	90%	62%	10%	72%	

The Andersons, Inc. is a diversified corporation located in Maumee, Ohio USA with interests in the grain, ethanol and plant nutrient sectors of U.S.A. agriculture as well as railcar leasing and repair, turf products production, and general merchandise retailing. For more information visit our website www.andersonsinc.com











GRAIN GROUP

ETHANOL GROUP

TURF & SPECIALTY

RAIL GROUP

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