



HUMIC SOLUTIONS

Humi^cDG™ | **Black Gypsum^{DG}™** | **UltraMate^{SG}™**



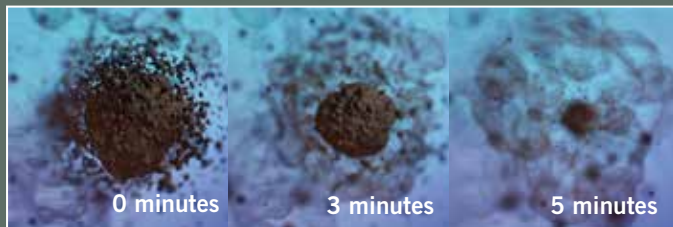
Introducing...

THE NEXT GENERATION OF SOIL HEALTH



DISPERSIBLE | SOLUBLE | SPREADABLE | BLENDABLE

DISPERSING GRANULE TECHNOLOGY



Enhanced particle distribution results in improved coverage and efficacy

Our unique offering of soil amendment products in Humic DG and Black Gypsum DG combine soil conditioning agents such as humate, gypsum and humic acid precursor, and combine them

with our Dispersing Granule (DG) Technology. DG Technology creates a dust free, spherical, ultra dry particle that rapidly disperses upon contact with water creating thousands of micro particles, resulting in improved coverage and solubility.

Humic¹² DG™

Humic DG enhances fertilizer efficiency, soil CEC and soil moisture retention and improves the availability of soil nutrients, resulting in improved soil and plant health.

- Balances soil fertility • Maximizes use of applied Nitrogen and Phosphorus
- Self incorporating for maximum availability • Improves soil structure

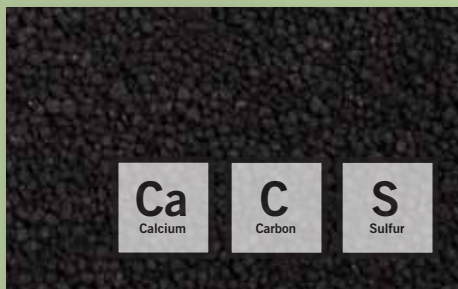
A homogeneous Dispersing Granule (DG) that combines pure, dry humate and humic acid precursor. Humic DG provides all the proven benefits of humic and fulvic acids in an easy to use dispersing granule product

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

- Provides dual Carbon sources that stimulate and improve soil microbiology
- Ultra dry granules can be applied straight or blended with fertilizers, including urea
- Uniform, spherical granules are easy to handle and evenly applied
- Available in **SGN 75 & 240**



Black Gypsum DG™



Black Gypsum DG is a unique bio-amendment that combines natural gypsum and humate in a homogeneous Dispersing Granule.

Gypsum + Humate

A homogeneous Dispersing Granule (DG) containing a combination of gypsum, humate and humic acid precursor. Black Gypsum DG delivers Calcium, Sulfur and Humate (a rich source of Carbon) directly to the soil utilizing The Andersons Dispersing Granule (DG) Technology.

- Humic substances enhance the plant's ability to take in essential nutrients and improve soil structure
- Gypsum acts as a soil conditioner, loosening hard packed soils and enhancing the flushing of harmful salts and excess sodium
- Available in **SGN 75 & 240**

SOLUBLE GRANULE TECHNOLOGY

Soluble granular (SG) sulfonated potassium humate product is easily used with drip irrigation, tank mixes and other liquid applicators. Dissolves quickly in both acidic and alkaline solutions and is compatible with most liquid fertilizer solutions



UltraMate SG™



Soil amendment products are designed to improve plant health and soil structure.

While improving the physical and chemical properties of your soil, such as water infiltration and retention, drainage, aeration and structure, UltraMate SG provides the best chance for success by improving overall plant health.

- Dissolves quickly in a wide range of fertilizer solutions, pH and equipment
- Improves stress tolerance and seed germination
- Increases microbial activity • Improves macro and micro nutrient availability
- Concentrated soluble granule reduces freight cost and increases handling efficiency

SAVES UNNECESSARY COST OF SHIPPING WATER IN LIQUID HUMATE PRODUCTS

Cost efficient | Save warehouse space | Apply liquid or dry



Two pallets
(1.05 tons)
of UltraMate SG



Five 250-gallon
totes of 12%
humic acid

FEATURES OF HUMIC DG & BLACK GYPSUM DG

BIOLOGICAL

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

DISPERSIBLE

Dispersing Granule Technology facilitates granule breakdown and soil incorporation

SPREADABLE

Uniform, spherical granules are easy to handle and evenly applied

BLENDABLE

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

DUAL CARBON SOURCES MAKE HUMIC DG AND BLACK GYPSUM DG UNIQUE

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



HUMIC ACID PRECURSOR

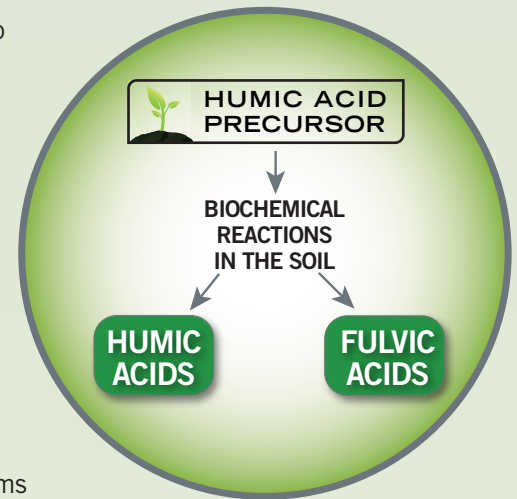
PLANT BASED ORGANIC CARBON SOURCE

Humic acid precursor contains a soluble form of organic carbon which releases into the soil as 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.

In soil solutions, 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 & BLACK GYPSUM DG

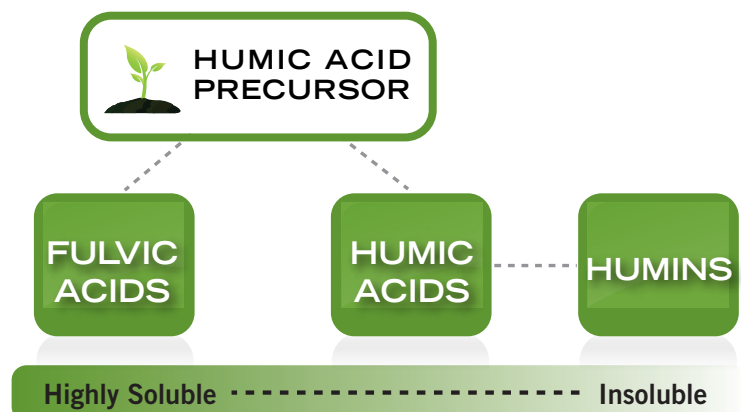
Humic DG and Black Gypsum DG are comprised of four biological components that range from very soluble to completely insoluble in soil media. These four components work together to provide the soil with a broad range of biological benefits, from highly soluble, plant available fulvic acids to the insoluble,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

HUMIC ACID PRECURSOR is the highly soluble portion of Humic DG and Black Gypsum 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 in soil solution can be absorbed by the plant and microbes easily. Fulvic acid works with the soil solution to aid in nutrient uptake and stimulate soil micro-organisms.

HUMIC ACIDS can be insoluble or soluble. They have a high cation exchange capacity (C.E.C.) and help to 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.



ENGINEERED FOR SUPERIOR HANDLING IN THE SPREADER OR AT THE BLENDER

Humic DG & Black Gypsum DG utilize 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 and Black Gypsum DG granules are unique among dry humate products in their ability to be blended with most fertilizer components.



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

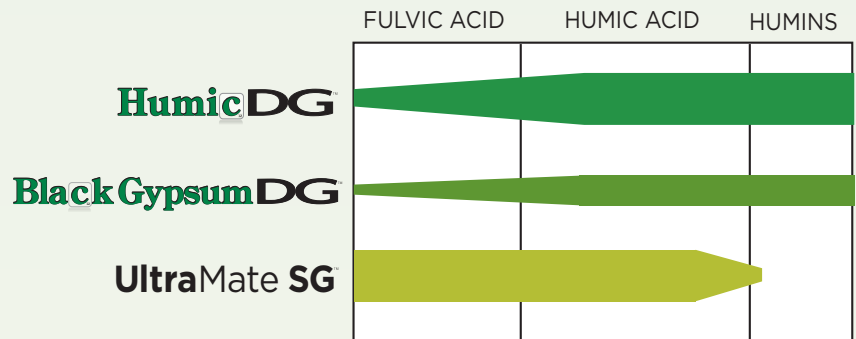
Product	Available SGN	Packaging	Bulk Density lb/cubic ft	UI	Moisture		Resistance to Attrition	Humic Acid Content (A&L Method**)	Humic Acid Precursor Content	Total Humic Acid Precursor + Humic Substances
					Target	Maximum				
Humic DG	75 240	40 lb bag 2000 lb bulk bag*	40	40+	7%	9%	90%	62%	10%	72%
Black Gypsum DG	75 240	50 lb bag 2000 lb bulk bag*	50	30+	3%	7%	90%	21%	10%	31%
UltraMate SG	220	30 lb bag	30	40+	-	15%	-	63%	-	63%

TEAM UP

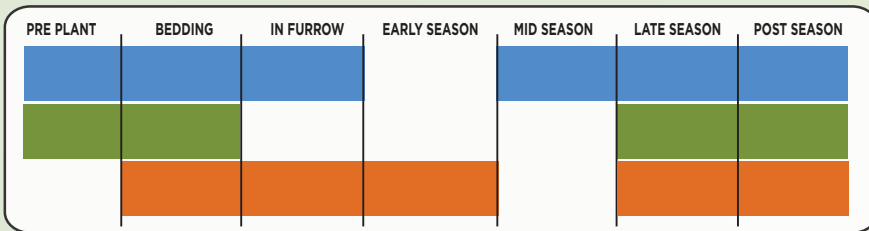
Improve nutrient efficiency and soil health throughout the season!

Most soils contain "tied up" nutrients that need to be made accessible to plants in order to optimize both growth and yield. The Andersons Humic Solutions are a group of humic acid-based soil amendments designed to reduce the effect of the environmental stresses of water, temperature and soil conditions on crops. Additionally, these products provide two technology platforms that improve the delivery of humic substances to the plant.

Humic DG and Black Gypsum DG are used as dispersing granule soil amendments, while UltraMate SG is a completely soluble granular product. Working together, these products provide the crop access (through both leaf and soil) to humic substances throughout the growing season.

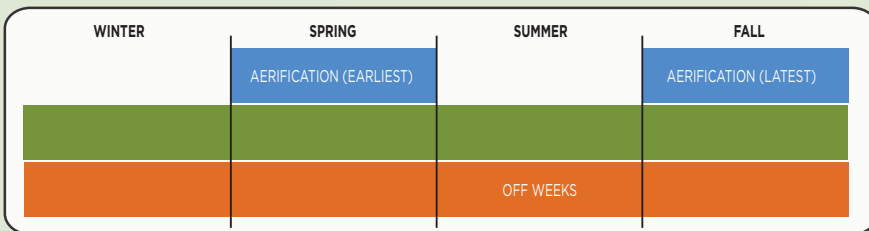


GROWER USE



Humic DG [Blue] **Black Gypsum DG** [Green]
UltraMate SG [Orange]

TURF USE



Humic DG [Blue] **Black Gypsum DG** [Green]
UltraMate SG [Orange]

When used in a program approach, Humic DG, Black Gypsum DG and UltraMate SG provide greater flexibility in programming your soil amendment applications, and are designed to complement conventional plant nutrition.

Humic DG and Black Gypsum DG are soil applied amendment solutions designed to increase the effect on soil microbial activity and applied nutrients. Dispersible Granule (DG) Technology maximizes the amount of humic acid delivered with each application. The methods of application are wide ranging, as Humic DG and Black Gypsum DG can be applied through variable rate technology (VRT) equipment, or direct applied in the in-furrow, bedding, broadcast or strip tillage methods. Both products can be also be blended in all fertilizer materials.

Ultramate SG has a greater flexibility than most liquid applied humic materials. Shipped in concentrated form, UltraMate SG can be quickly diluted and applied at variable rates to meet the cropping conditions and liquid application method of the grower. It is excellent when applied thru irrigation, including drip, center pivot or other types, and can be tank mixed for in-furrow application at planting. UltraMate SG is also an excellent way to deliver humic substances to the crop during periods of environmental stress through conventional spray equipment and side dress applications.

With advanced delivery technologies designed for all types of application methods, The Andersons Humic Solutions truly represent the next generation of soil health, delivering the humic substances plants need, more effectively and efficiently, throughout the growing season.

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