

# BLACK acid 16/21 Zn

**Guaranteed Analysis**  
15-20-0

Total Nitrogen (N).....	15.0%
9.25% Urea Nitrogen	
5.75% Ammoniacal Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	20.0%
Sulfur (S).....	3.0%
Zinc (Zn).....	0.50%

*Derived From: Urea Sulfuric Acid, Ammonium Phosphate, Zinc Sulfate and Zinc Citrate*

**GENERAL INFORMATION:** Black Acid™ 16/21 Zn is designed to be applied to soil with elevated pH, high lime content and provides an acidic form of stable Nitrogen and Phosphorus for improved availability in certain soils. Reducing pH in high pH soils may improve nutrient availability, reduce soil crusting and improve water infiltration.

Each gallon of Black Acid™ 16/21 Zn contains 1.07 lbs of Nitrogen, as Urea, 0.67 lbs of Nitrogen as Ammoniacal Nitrogen, 1.50 lbs of P<sub>2</sub>O<sub>5</sub> in polyphosphate form, 0.81 lbs of P<sub>2</sub>O<sub>5</sub> in orthophosphate form, 0.35 lbs of Sulfur, and 0.06 lbs of Zinc as Zinc Sulfate and Zinc Citrate, and also contains 3% (by volume) Source to Source's Acid Blendable Humic Acid (A.B.H.A.). It is not recommended for use as a foliar material. This product is intended to be a supplement to a fertility program. Always monitor crop nutrient needs and responses with a soil, leaf tissue and irrigation water analysis program.

**NET CONTENTS:**

250 GALLONS (946 LITERS)

BULK GALLONS

11.58 lbs per gallon (1.39 kgs per liter) @ 68°F

**Source To Source**  
Distributed by:  
Source to Source - a TAP Family Company  
3233 South "I" Street  
Tulare, CA 93274  
Toll Free: 866.727.4572

**NOT FOR USE IN  
ORGANIC CROP AND  
FOOD PRODUCTION**

**PRECAUTIONS**  
Please read before use

**HANDLING:**

This is an acidic fertilizer, and adding water will increase corrosivity. Always add acid to water; never add small amounts of water to acid. If the addition of water is necessary to increase the volume of the mechanical application, the corrosivity of the material will greatly increase and the blended material should be applied as quickly as possible. Do not store product that has been mixed with water. Directly after use, all equipment, irrigation lines and storage equipment should be flushed thoroughly and a neutralizing solution should be added to prevent corrosion.

**WORKER SAFETY:**

Avoid contact with skin, clothing, footwear, painted surfaces and anything that may be damaged by acids. Always wear boots, gloves, splash-shielded goggles, full-face shields and other approved safety devices made from suitable protective equipment such as synthetic rubber or non-nylon plastic while handling this material. This material will damage clothing made of nylon, cotton, leather or natural rubber.

**APPLICATION EQUIPMENT & STORAGE:**

Use only acid compatible equipment, pumps, seals, meters, nozzles, etc., due to the corrosive nature of this material. This material may be stored or applied in polypropylene or stainless steel containers with sulfuric acid compatible seals and/or valves. This material should not be stored in aluminum or mild steel containers, or used in application equipment that has brass, copper, nylon, pvc or any components containing alloys in the fittings or nozzles. Due to the acidic formulation of this material, chemical residues and mineral build-up in application equipment may be dislodged during initial tank mixing. Use only thoroughly rinsed, clean equipment. Rinse all application equipment thoroughly each day, directly after use and add a neutralizing solution such as soda ash, baking soda or solution grade limestone to avoid damage to the equipment. Over prolonged periods of storage, mild agitation may be required.

**TRANSPORTATION:**

DOT Classification: Class 8  
This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101. Shipments should be shipped: Corrosive Liquid, n.o.s., Class 8, UN1760, Packing Group III.



**DIRECTIONS FOR USE**

**SOIL APPLICATIONS:** Black Acid™ 16/21 Zn can be soil applied via mechanical application through direct spray or injection to the soil. Apply in a uniform manner that avoids droplets coming into contact with living tissue to avoid unintentional crop damage. It is not recommended in applications where material will come into direct contact with seeds or young roots in its concentrated form. Use acid compatible storage and equipment (see precautions). Use caution when applying in soils with a pH lower than 7.0. High application rates of Black Acid products in base or acidic soils may cause over-acidification.

**Soil Application Directions for Row Crops or Vegetables**

- Pre plant: Apply broadcast or band directly over listed beds. Incorporate with tillage or irrigation prior to worker re-entry. Pre plant injections directly into the bed can be made if the band is located a safe distance from the seed. This material is not recommended for pop up applications, or any applications where product comes in contact with the seed or emerging seedlings.
- Side dress or in-furrow: This material can be side dressed into bed or sprayed into furrow. Incorporate with tillage or irrigation prior to worker re-entry.

**Soil Application Directions for Trees & Vines**

- Pre plant: Spray in concentrated band down the planting line. Incorporate with tillage or irrigation prior to planting and/or worker re-entry.
- Existing trees or vines: Band spray or shank application into the soil at or near dripline of the tree or in furrow for flood or furrow irrigated trees or vines. Incorporate with tillage or irrigation prior to worker re-entry.

**WATER RUN:** Black Acid™ 16/21 Zn may be water run through furrow or flood irrigation. Add at a point in the system that has adequate water turbulence so as to permit complete mixing with the irrigation water prior to contacting any concrete or steel irrigation system components. This material is heavier than water and can ribbon out in slowly moving streams of water. Do not apply through sprinklers after the crop is planted. Avoid applications that acidify irrigation water below 6.0 pH for prolonged periods of time. Applications where the pH is allowed to drop below a 6.0 (to a 3.0 – 4.0) is ok, but for no more than 15 minutes. When applying this material via a fertigation system, continue to operate the system 30-60 minutes after material has been completely injected to flush clean water through the system. Verify compatibility of all system components with acid fertilizers. SEE COMPATIBILITY AND PRECAUTIONS PRIOR TO USE

**COMPATIBILITY:**

Black Acid™ 16/21 Zn is not typically compatible with other fertilizers and blending is not recommended without knowledge of compatibility. Contact a Source to Source representative for a limited list of compatible mixes. Under no circumstances should this product be mixed or blended in the field. Due to the low pH, improper blends or handling techniques can be hazardous. Mixing with high pH fertilizers may cause a hot and violent reaction. User assumes full responsibility to ensure product, equipment and plant compatibilities.

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CAUTION: KEEP OUT OF REACH OF CHILDREN.

Harmful if swallowed. May cause eye and skin irritation. Seek immediate medical attention.

NOTICE: Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. Buyer shall assume all risks of use including, but not limited to crop injury, ineffectiveness or other unintended consequences as may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of the seller. In no case shall Source to Source be liable for consequential, special or indirect damages resulting from the use or handling of this product.

Information regarding the contents and levels of metals in this product is available by calling 1.866.727.4572.

Black Acid™ is a trademark product of Source to Source, Tulare CA. This label is for use in California and Arizona. For use in other states please contact your Source to Source dealer, as labels may vary by state. Always refer to the label on the product before use.

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Please read before use

**HANDLING:**

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**WORKER SAFETY:**

Avoid contact with skin, clothing, footwear, painted surfaces and anything that may be damaged by acids. Always wear boots, gloves, splash-shielded goggles, full-face shields and other approved safety devices made from suitable protective equipment such as synthetic rubber or non-nylon plastic while handling this material. This material will damage clothing made of nylon, cotton, leather or natural rubber.

**APPLICATION EQUIPMENT & STORAGE:**

Use only acid compatible equipment, pumps, seals, meters, nozzles, etc., due to the corrosive nature of this material. This material may be stored or applied in polypropylene or stainless steel containers with sulfuric acid compatible seals and/or valves. This material should not be stored in aluminum or mild steel containers, or used in application equipment that has brass, copper, nylon, pvc or any components containing alloys in the fittings or nozzles. Due to the acidic formulation of this material, chemical residues and mineral build-up in application equipment may be dislodged during initial tank mixing. Use only thoroughly rinsed, clean equipment. Rinse all application equipment thoroughly each day, directly after use and add a neutralizing solution such as soda ash, baking soda or solution grade limestone to avoid damage to the equipment. Over prolonged periods of storage, mild agitation may be required.

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**SUGGESTED APPLICATION RATES AND TIMINGS**

**SOIL & WATER RUN APPLICATION RATES & TIMINGS:**

See DIRECTIONS FOR USE on PAGE 1 prior to application.

**GRAPES, STONE FRUITS & POME FRUITS** (Including- Apples, Pears, Cherries, Plums, Nectarines, Peaches, Prunes, Apricots, Kiwis and Berries)

Apply to soil or through irrigation systems 3-10 gallons per acre to soil from bud-break to pre-bloom. Apply at fruit sizing at 3-10 gallons. Repeat applications in 14-21 day intervals for a total of 20 gallons through harvest. Apply additional 5-10 gallons per acre post harvest. Each gallon of Black Acid™ 16/21 Zn contains 1.74 lbs of Nitrogen.

**ALMONDS, PECANS, PISTACHIOS, & WALNUTS**

Apply to soil or through irrigation systems prior to bloom at 3-10 gallons of Black Acid™ 16/21 Zn per acre. Repeat applications may be made starting at petal fall in 14-21 day intervals for a total of 30 gallons through harvest. Apply additional 5-10 gallons of Black Acid™ 16/21 Zn per acre post harvest.

**CITRUS & AVOCADOS**

Apply to soil or through irrigation systems at first sign of spring flush through petal fall at a minimum of 3 gallons of Black Acid™ 16/21 Zn per acre per application. Avoid applications during the bloom cycle. Repeat applications may be made in 14-21 day intervals starting at petal fall for a maximum of 30 gallons of Black Acid™ 16/21 Zn through harvest.

**TOMATOES, PEPPERS, ONIONS, GARLIC & other VEGETABLE CROPS & ROW CROPS** (Including cotton and Small Grains)

**PRE PLANT:** 5-50 gallons of Black Acid™ 16/21 Zn per acre. Apply broadcast or band directly over listed beds. Incorporate with tillage or irrigation prior to worker re-entry. Pre plant injections directly into the bed can be made in the band is located a safe distance from the seed. This material is not recommended for pop up applications, or any applications where product comes in contact with the seed.

**WATER RUN:** 5-15 gallons of Black Acid™ 16/21 Zn per acre, starting 7-10 days after transplanting or after plants are 3-5" tall. Repeat in 14-21 day intervals as needed. May be water run through furrow or flood irrigation. Do not apply through sprinklers after the crop is planted. Avoid applications that acidify irrigation water below 6.0 pH for prolonged periods of time.

**DRIP IRRIGATION:** 1-5 gallons of Black Acid™ 16/21 Zn per acre may applied through drip irrigation. Repeat in 10-14 day intervals as needed. Follow application with clear water for 30-60 minutes to clear the system of all fertilizer. Verify compatibility of all system components with acid fertilizers. Avoid applications that acidify irrigation water below 6.0 pH for prolonged periods of time. Applications where the pH is allowed to drop below a 6.0 (to a 3.0 – 4.0) is ok, but for no more than 15 minutes.

**SIDE DRESS OR IN-FURROW:** 5-20 gallons of Black Acid™ 16/21 Zn per acre can be side dressed into bed or sprayed into furrow. Incorporate with irrigation prior to worker re-entry.

**RICE:**

**DRY PLANTING:** Broadcast 20-40 gallons of Black Acid™ 16/21 Zn per acre and incorporate prior to planting. Incorporate with tillage or irrigation prior to worker re-entry.

**WET PLANTING:** Apply 15-30 gallons of Black Acid™ 16/21 Zn to the soil with rice roller directly into the seed furrow. Ensure compatibility of all application components. Incorporate with irrigation prior to planting and/or worker re-entry.

**ALFALFA:**

**PRE PLANT:** At pre plant, apply 5-20 gallons of Black Acid™ 16/21 Zn per acre. Incorporate with tillage or irrigation prior to planting and/or worker re-entry. Each gallon of Black Acid™ 16/21 Zn contains 1.74 lbs of Nitrogen.

**WATER RUN:** Water run 5-15 gallons of Black Acid™ 16/21 Zn per acre after each cutting, and another 5-15 gallons of Black Acid™ 16/21 Zn per acre in the fall, prior to dormancy/semi-dormancy period.

**PLEASE NOTE: EACH GALLON OF BLACK ACID™ 16/21 Zn CONTAINS 1.74 LBS OF NITROGEN.**