

# APPLICATION GUIDE

## — THE ORIGINAL — SLOW RELEASE NITROGEN 28-0-0

LIQUID NITROGEN FERTILIZER CONTAINING TRIAZONE™

### N-Sure® – Slow Release Nitrogen Solution

Total Nitrogen (N)	28%
Urea Nitrogen	7.8%
Other Water Soluble Nitrogen	20.2%*
*20.2% Slowly available nitrogen from urea-triazone solution	
Density: pounds per gallon at 68°F	10.7
Volume: gallons per ton	187

#### GENERAL INFORMATION

N-Sure nitrogen fertilizer solution is a clear liquid containing the patented slow-release nitrogen compound Triazone™. Triazone nitrogen promotes crop safety, increased nitrogen absorption, translocation and remobilization when used on agricultural crops including vegetable, fruit, nut and field crops.

N-Sure contains 72% of the total nitrogen as slow release nitrogen (SRN) and less urea than other slow release nitrogen fertilizer solutions.

N-Sure may be applied as a foliar spray application on all field crops to enhance growth and quality and to correct nitrogen deficiencies.



## APPLICATION & USE RECOMMENDATIONS

N-Sure may be soil applied as a band, sidedress or injected through the irrigation system, sprinkler, drip or center pivot.

N-Sure contains 3 pounds of nitrogen per gallon.

N-Sure may be applied as a concentrate or dilute solution by ground or aerial application. Apply with sufficient water to

achieve adequate plant coverage, avoid application when temperatures are above 90°F and relative humidity is below 30%.

N-Sure gives the grower excellent crop safety and helps promote uniform growth.

N-Sure's normal nitrogen release pattern is 8 to 10 weeks. In the spring, fall and during periods of cool temperatures, it is recommended that low-biuret urea be blended with N-Sure to enhance the release pattern.

N-Sure is well suited to the custom formulation of fertilizer blends and is compatible with many phosphorus, potassium and micronutrient sources as well as many crop protection chemicals. In the absence of published data, Tessenderlo Kerley, Inc. recommends testing for compatibility in all spray combinations by a simple jar test with appropriate concentrations. Care should be taken not to blend N-Sure with highly acidic materials and materials containing a high level of free ammonia.

## SUGGESTED APPLICATION RATES

### VEGETABLES

FOLIAR	QTS / ACRE	TIME OF APPLICATION
Asparagus	4 - 8	At mid-fern development and repeat at 14 to 21 day intervals.
Beans	2 - 8	At early flowering and repeat in 7 to 10 days.
Broccoli, Brussel Sprouts, Cabbage & Cauliflower	4 - 8	Prior to head formation, repeat in 10 to 14 days.
Carrots	4 - 6	When plants are 3 to 6 inches tall. Repeat at three week intervals or as required.
Celery	4 - 6	When plants are 8 to 12 inches tall and repeat at 10 to 14 day intervals.
Corn (sweet)	2 - 8	When plants are 12 to 24 inches tall, then at tassel emergence and repeat after pollination.
Cucumbers, Melons & Squash	4 - 8	Early flowering, repeat at 10 to 14 day intervals.
Kale	4 - 8	When sufficient foliage is present.
Lentils	4 - 6	Early flowering and repeat at 10 to 14 day intervals.
Lettuce	4 - 6	After thinning, then at early head formation and repeat at 10 to 14 day intervals.
Okra	4 - 6	At bud stage and repeat at 10 to 14 day intervals.
Onions & Garlic	4 - 8	Mid-set development and repeat at 14 to 21 day intervals.
Peas	4 - 8	Early flowering and repeat in 10 to 14 days.
Peppers	4 - 8	Early fruit set and repeat at 10 to 14 day intervals.
Spinach	4 - 8	When sufficient foliage is present and repeat at 14 to 21 days.
Tomatoes (Process & Fresh)	4 - 8	At full bloom and repeat at 10 to 14 day intervals.
Other Crops	4 - 6	When sufficient foliage is present or at early fruit set. Try on a small area until more experience and trials have been completed to determine if higher rates are desirable.

# CHOOSE

## THE SLOW-RELEASE NITROGEN WITH LESS UREA

### FERTIGATION

**Sprinkler Irrigation:** Beginning at the 3rd to 4th leaf stage, apply 2 to 5 gallons per acre per application every 10 to 14 days based on crop requirements.

**Drip Irrigation:** Apply 2 to 5 gallons per acre per application 3 to 6 times during the growing season as needed.

### FRUITS & NUTS

FOLIAR	QTS / ACRE	TIME OF APPLICATION
Almond, Filberts, Pecans & Walnuts	4 - 10	At full leaf and repeat at early nut and expansion.
Apples	4 - 6	Begin at first full leaf and apply as needed during the growing season.
Blueberries	4 - 6	Early fruit set and repeat at early fruit color.
Caneberries	4 - 6	Prior to fruit set.
Cherries, Peaches, Pears & Plums	4 - 6	Prior to fruit set.
Citrus	4 - 10	Early bloom and repeat after fruit set.
Citrus (Winter Rate)	4 - 10	Apply in mid-January and repeat as required.
Cranberries	4 - 6	Hook stage and repeat after fruit set.
Grapes (Table)	2 - 4	Prior to fruit set.
Grapes (Raisin)	2 - 4	When sufficient foliage is present. Repeat as needed.
Grapes (Wine)	2 - 4	When sufficient foliage is present. Repeat as needed.
Olives	4 - 6	Early fruit development and repeat as needed.
Strawberries	4 - 6	Early flowering and repeat every 14 days through harvest. Initiate fall application when new growth reaches 3 inches in height.
Other Crops	4 - 6	When sufficient foliage is present or at early fruit set. Try on a small area until more experience and trials have been completed to determine if higher rates are desirable.

N-Sure may be applied in a concentrate spray (50 to 100 gallons of water) or dilute spray (200 to 400 gallons of water). Contact your local dealer on dilution rates less than 50 gallons per acre.

## FERTIGATION

**Sprinkler Irrigation:** Apply 2 to 5 gallons per acre per application every 10 to 14 days based on crop requirements.

**Drip Irrigation:** Apply 2 to 5 gallons per acre per application 3 to 6 times during the season when roots are actively growing as needed.

### FIELD CROPS

FOLIAR	QTS / ACRE	TIME OF APPLICATION
Alfalfa	4 - 8	Apply after each cutting when sufficient foliage is present.
Canola	4 - 8	Apply just prior to bolting.
Corn (Field)	2 - 8	When plants are 12 to 24 inches tall, then at tassel emergence and repeat after pollination.
Corn (Seed)	2 - 8	Before detasseling and repeat after pollination.
Cotton	4 - 8	Early boll formation and repeat at 14 to 21 day intervals.
Flax	4 - 8	Early boll development.
Grain Sorghum	2 - 6	After pollination.
Grass Seed Production	4 - 10	Seed head elongation.
Hops	4 - 6	Before cone development.
Peanuts	4 - 6	Early bloom and repeat at 14 to 21 day intervals until pods are filled.
Potatoes	4 - 8	Tuber initiation and repeat at 10 to 14 day intervals until maximum tuber development has occurred.
Rice	4 - 10	Panicle initiation. Repeat as required.
Small Grains	4 - 8	Tillering through flag leaf emergence.
Soybeans	2 - 8	Early pod formation and repeat in 14 to 21 days.
Sugar Beets	4 - 8	10 to 12 leaf stage and repeat at 20 leaf stage.
Sunflowers	4 - 8	When outer seeds start to fill, repeat in 10 to 14 days.
Tobacco	6 - 10	Plant bed stage to near maturity as needed to maintain crop growth and quality.
Other Crops	4 - 6	When sufficient foliage is present or at early fruit set. Try on a small area until more experience and trials have been completed to determine if higher rates are desirable.

**N-SURE IS THE UNIQUE  
SRN SOLUTION CONTAINING UREA-TRIAZONE**

## FERTIGATION

**Center Pivot:** Apply 3 to 5 gallons per acre per application as needed based on crop requirements.

**Drip Irrigation:** Apply 3 to 5 gallons per acre per application 3 to 6 times during the growing season as needed.

**Sprinkler Irrigation:** Beginning at the 3rd to 4th leaf stage, apply 3 to 5 gallons per acre per application every 10 to 14 days based on crop requirement.

FOLIAR	QTS / ACRE	TIME OF APPLICATION
Christmas Trees & Nursery Stock	4 - 6	As needed or at 14 to 21 day intervals.

## FERTIGATION

**Sprinkler Irrigation:** Apply 2 to 4 gallons per acre per application every 10 to 14 days based on crop requirements.

**Drip Irrigation:** Apply 2 to 4 gallons per acre per application 3 to 6 times during the growing season as needed.

## LAWN CARE PROGRAM

**Cool Season Grasses:** Rates may vary from 0.5 to 0.9 pounds of nitrogen per 1000 square feet in 4 to 5 applications at 8 to 10 week intervals for a total application rate not to exceed 3.25 pounds of nitrogen per year. In cool temperatures it is suggested that a greater portion of the nitrogen come from urea.

**Warm Season Grasses:** Rates may vary from 0.75 to 1.0 pounds of nitrogen per 1000 square feet in 5 to 6 applications at 8 to 10 week intervals for a total application rate not to exceed 6 to 8 pounds of nitrogen per year. Rates of nitrogen and frequency of application may vary due to cultivar and accepted turf practices.

## FERTIGATION

N-Sure may be injected during each irrigation at rates of 11 to 21 fluid ounces (0.25 to 0.50 pound of N) per thousand square feet. Rates may vary in accordance with the irrigation schedule. Use the lower recommended rate in more frequent watering.

## TANK MIXING PROCEDURES

- Add 1/2 of total water spray tank.
- Start circulating material in tank.
- Add recommended amount of N-Sure or N-Sure based N-P-K fertilizer blend.
- Add compatible micronutrients.
- Add flowable materials.
- Add emulsifiers.
- Add any soluble powders and/or water soluble fertilizers. All should be pre-dispersed in water before adding to the spray tank solution.
- Complete filling of spray tank to desired volume and continue circulating prior to spray application.
- Flush all spray and nurse tank equipment after usage.

If a lower amount of slow-release nitrogen is desired, the fertilizer blender has the option of mixing N-Sure and low-biuret urea (46-0-0) together. **The following chart provides the correct mixing ratios based on 1 pound of actual N. Sufficient water must be added to the following to dissolve the urea in the blend.**



See SDS for additional information on safety and handling at:  
[cropvitality.com/nsure](http://cropvitality.com/nsure)

**Keep out of reach of children. Use caution when handling.**



# TECHNICAL DATA

## N-Sure 28-0-0

PLANT NUTRIENT CONTENT WEIGHT %	
Guaranteed Total Nitrogen	28
Urea Nitrogen	7.8
Slow-Release Nitrogen	20.2
TYPICAL DISTRIBUTION OF NITROGEN FORMS — % OF TOTAL NITROGEN	
Slow-Release Nitrogen, Total	72%
Nitrogen from Triazone Compounds	67%
Nitrogen from Other Organic N Compounds	5%
Urea Nitrogen	28%
TYPICAL PROPERTIES	
Specific Gravity	1.29
pH	9.5 - 11.0
Salt-Out Temperature	< 0°F
Appearance	Clear, Blue or Colorless
FORMULATION AND APPLICATION FACTORS, 68°F	
Density: pounds per gallon	10.7
Volume: gallons per ton	187
Pounds of Nitrogen per gallon	3.0



## Warranty and Limitation of Damages

Tessenderlo Kerley, Inc. (TKI) warrants only that this product conforms to the product description in the Application Guide. Except as warranted by this description, TKI makes no representation or warranty or guarantee, whether expressed or implied, of fitness for a particular purpose of merchantability, or of product performance. TKI does not authorize any agent or representative to make any such representation, warranty or guarantee. To the extent consistent with applicable law, TKI's maximum liability for breach of its warranty or for use of this product, regardless of the form of action, shall be limited to the purchase price of this product. To the extent consistent with applicable law, buyer and user acknowledge and assume all risks and disposal liability resulting from handling, storage, use and disposal of this product. If buyer does not agree with or accept these warranty and liability limitations, buyer may return the unopened container to the place of purchase for full refund. Buyer's use of this product shall constitute conclusive evidence of buyer's acknowledgment and acceptance of the forgoing limitations. Some jurisdictions do not allow the exclusion of implied warranties or the limitation of certain damages, so the above may not apply. The purchase, delivery, acceptance and use of this product by the buyer are subject to the terms and conditions of seller's sales invoice for this product.

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