

Application Guide



Tessenderlo KERLEY

GUARANTEED ANALYSIS

| | |
|------------------------------------|---------|
| Total Nitrogen (N)..... | 28% |
| Urea Nitrogen..... | 7.8% |
| Other Water Soluble Nitrogen | 20.2% * |

*20.2% Slowly available nitrogen from urea-triazone solution
Derived from urea-triazone solution

Density:

| | |
|----------------------------------|-------|
| Density, lbs/gallon @ 60°F | 10.72 |
| Volume, gallons/ton | 186.6 |

GENERAL DIRECTIONS

N-Sure NITROGEN FERTILIZER SOLUTION is a clear liquid containing the patented slow-release nitrogen compound TRIAZONE™. TRIAZONE nitrogen means increased crop safety, increased nitrogen absorption, translocation and remobilization when used on agricultural crops including vegetable, fruit, nut and field crops.

N-Sure, contains 72% slow-release nitrogen (SRN) and less urea than any other slow-release nitrogen fertilizer solution.

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

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 eight to ten 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

| VEGETABLE FOLIAR: | RATE (QTS/ACRE) | TIME OF APPLICATION |
|--|-----------------|--|
| Asparagus | 4-8 | At mid-fern development and repeat at 14 to 21 day intervals. |
| Beans (Green & Lima) | 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 a 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. |

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: | RATE (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 and Plums | 4-6 | Prior to fruit set |
| Citrus | 4-10 | Early bloom and repeat after fruit set. |
| Winter Rate | 4-10 | Apply in mid-January and repeat as required. |
| Cranberries | 4-6 | Hook stage and repeat after fruit set. |
| Grapes Table Raisin | 2-4 2-4 | Prior to fruit set. When sufficient foliage is present. Repeat as needed. |
| 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 | RATE (QTS/ACRE) | TIME OF APPLICATION |
|-----------------------|------------------------|--|
| FOLIAR: | | |
| 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. |
| 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. |

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.

CHRISTMAS TREES AND NURSERY STOCK

| | RATE (QTS/ACRE) | TIME OF APPLICATION |
|----------------|------------------------|---|
| FOLIAR: | 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 .5 to 1 pound 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 3.5 to 4.0 pounds of nitrogen per year. In cool temperatures it is suggested that a portion of the nitrogen come from urea.

Warm Season Grasses:

Rates may vary from .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 (.25 to .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.

MIXING PROCEDURES WHEN TANK MIXING N-SURE

- 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 emulsifiables
- 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.**

| % SRN BLEND DESIRED | N-SURE 72% SRN FLUID OZ. | LOW BIURET UREA (46-0-0) |
|---------------------|--------------------------|--------------------------|
| 25% SRN | 14.8 | 1.4 |
| 35% SRN | 20.7 | 1.1 |
| 40% SRN | 23.6 | .96 |

TECHNICAL DATA INFORMATION

PLANT NUTRIENT CONTENT

Guaranteed Total Nitrogen (N), Wt. % 28.0 Min
 Urea Nitrogen (N), Wt. % 7.8 Max
 Slow-Release Nitrogen (N), Wt. % 20.2 Min
 Soluble Potash (K₂O), Wt. % 0.6 Typical

TYPICAL DISTRIBUTION OF NITROGEN FORMS, % OF TOTAL N

Slow-Release Nitrogen, Total 72
 From TRIAZONE compounds 67
 From Other N Compounds 5
 Urea Nitrogen 28

TYPICAL PROPERTIES

Specific Gravity, 60°/60° F 1.286
 pH 9.5
 Salting-Out Temperature, °F <0
 Freezing Point, °F <0
 Appearance Clear, Blue

N-SURE FORMULATION AND HANDLING FACTORS

Pounds per gallon 10.72
 Gallons per ton 186.6
 Pounds N per gallon 3.0

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maximum liability for breach of its warranty or for shall not exceed the purchase price of this product. disposal liability resulting from handling, storage, use with directions or not. If buyer does not agree with may return the unopened container to the place of the exclusion of implied warranties or the limitation purchase, delivery, acceptance and use of this product of seller's sales invoice for this product.

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