



Tessenderlo
KERLEY
The Specialty Liquid Fertilizer People™

N – SURE®

28 – 0 – 0

A SLOW-RELEASE NITROGEN FERTILIZER SOLUTION FOR FEEDING AGRICULTURAL CROPS

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.

KEEP OUT OF REACH OF CHILDREN

CAUTION — MAY CAUSE IRRITATION TO SKIN AND EYES

PRECAUTIONARY STATEMENTS:

Avoid prolonged or repeated contact with eyes, skin and clothing. Chemical goggles or a full face shield should be worn. To protect skin wear appropriate protective equipment, such as rubber or plastic aprons, rubber gloves and boots. Avoid breathing mist or vapor. Keep containers closed. Wash thoroughly after handling. May cause gastrointestinal distress if swallowed.

FIRST AID: In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention if irritation occurs. In case of skin contact, flush skin with water. If irritation occurs, seek immediate medical attention. Remove and wash contaminated clothing before reuse. If swallowed, give large amounts of water and induce vomiting by touching back of throat with finger unless unconscious. Seek immediate medical attention.

HANDLING AND STORAGE: Minimize skin exposure. Store mini-bulks and smaller containers out of the sun in an area of moderate temperature. Do not reuse containers. Avoid containers, piping or fittings made of copper-containing alloys or galvanized metal. Dispose of containers in accordance with local regulations and requirements.

IN CASE OF SPILL: Contain spill and maximize recovery. Keep spill out of water sources. Exercise caution in area of spill for slippery conditions. Dispose of spilled material in accordance with regulatory requirements.

PHYTOTOXICITY: Plant and leaf injury may occur on some crops when certain weather and growing conditions are present. The user assumes all risks of use and handling.

Before handling this product, consult the Material Safety Data Sheet for handling, safety and first aid information.

Follow directions carefully, including precautions for safe handling.

GENERAL DIRECTIONS

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 especially during periods of low humidity and high temperature to achieve the maximum benefit of foliar fertilization.

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

N-SURE's normal nitrogen release pattern is eight to twelve 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 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

<u>VEGETABLES</u>	<u>RATE</u> (QTS./ACRE)	<u>TIME OF APPLICATION</u>
<u>FOLIAR:</u>		
Asparagus	6-10	At mid-fern development and repeat at 14 to 21 day intervals.
Beans (Green & Lima)	4-6	At early flowering and repeat in 7 to 10 days.
Broccoli, Brussel Sprouts, Cabbage & Cauliflower	6-10	Prior to head formation and 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)	4-6	When plants are 12 to 24 inches tall, then at tassel emergence and repeat after pollination.
Cucumber, Melons and Squash	6-10	Early flowering and repeat at 10 to 14 day intervals.
Kale	6-10	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.
Onion and Garlic	6-10	Mid-set development and repeat at 14 to 21 day intervals.
Peas	6-10	Early flowering and repeat in 10 to 14 days.
Peppers	6-10	Early fruit set and repeat at 10 to 14 day intervals.
Spinach	6-10	When sufficient foliage is present and repeat at 14 to 21 days.
Tomatoes (Process and Fresh)	6-10	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.

<u>FRUITS AND NUTS</u>	<u>RATE</u> (QTS./ACRE)	<u>TIME OF APPLICATION</u>
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FOLIAR:

Almond, Filbert, Pecans and Walnuts	6-10	At full leaf and repeat at early nut expansion.
Apples	4-6	Begin at first full leaf and apply as needed during the growing season.
Blueberry	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	6-10	Early bloom and repeat after fruit set.
Winter Rate	12-30	Apply in mid-January and repeat as required.
Cranberry	4-6	Hook stage and repeat after fruit set.
Grapes Table	2-4	Prior to fruit set.
Raisin	2-4	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 TIME OF APPLICATION
(QTS./ACRE)

FOLIAR:

Alfalfa	4-12	Apply after each cutting when sufficient foliage is present.
Canola	4-8	Apply just prior to bolting.
Corn Field	4-6	When plants are 12 to 24 inches tall, then at tassel emergence and repeat after pollination.
Seed	4-6	Before detasseling and repeat after pollination.
Cotton	4-12	Early boll formation and repeat at 14 to 21 day intervals.
Flax	6-10	Early boll development.
Grain Sorghum	4-6	After pollination.
Grass Seed Production	8-12	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	6-10	Tuber initiation and repeat at 10 to 14 day intervals until maximum tuber development has occurred.
Rice	8-12	Panicle initiation. Repeat as required.
Small Grains	6-10	Tillering through flag leaf emergence.
Soybeans	6-10	Early pod formation and repeat in 14 to 21 days.
Sugar Beets	8-12	10 to 12 leaf stage and repeat at 20 leaf stage.
Sunflower	6-10	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

	QT./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.

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 equipment after usage.

WHEN ADDITIONAL POTASSIUM AND SULFUR ARE NEEDED.

MIXING N-SURE WITH KTS® 0-0-25+17S

KTS (0-0-25+17S) is Tessengerlo KERLEY's liquid potassium/sulfur fertilizer. KTS is chlorine- free and contains two forms of sulfur. It is the highest analysis of K plus S in a clear liquid fertilizer. KTS and N-SURE mix easily together. Consult the KTS Application Guide for further information on the use of KTS on specific crops.

KTS AND N-SURE FERTILIZER SOLUTIONS				
KTS (0-0-25+17S)	Ratio	N-SURE (28-0-0)72%SRN	=	APPROXIMATE ANALYSIS
1	:	1	=	13-0-13- 9S
2	:	1	=	9-0-17-12S
3	:	1	=	6-0-19-13S
4	:	1	=	5-0-20-14S
5	:	1	=	4-0-21-15S
•	•	•	•	••••••••
1	:	2	=	18-0- 9- 6S
1	:	3	=	20-0- 7- 5S
1	:	4	=	22-0- 5- 4S
1	:	5	=	23-0- 4- 3S

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 (K ₂ O), 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

WARRANTY AND LIMITATION OF DAMAGES

Tessenderlo Kerley, Inc. warrants only that this product conforms to the product description on the label. Tessenderlo Kerley, Inc. makes no representation or warranty or guarantee, whether expressed or implied, disclaims any warranty of fitness for a particular purpose of merchantability, or of product performance. Tessenderlo Kerley, Inc. does not authorize any agent or representative to make any such representation, warranty or guarantee. Tessenderlo Kerley, Inc.'s maximum liability for breach of its warranty or for use of this product, regardless of the form of action, shall not exceed the purchase price of this product. Buyer and user acknowledge and assume all risks and disposal liability resulting from handling, storage, use and disposal of this product, whether in accordance with directions or not. 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. Some states 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 is subject to the terms and conditions of seller's sales invoice for this product.

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