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(Stauffer Shield)

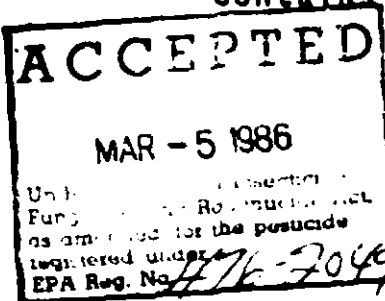
SUTAN® + 7-E

Selective Herbicide-Emulsifiable Liquid
For Corn (Field, Sweet, Silage and Popcorn)

ACTIVE INGREDIENT:

S-ethyl diisobutylthiocarbamate	88.2%
<u>INERT INGREDIENTS:</u>	<u>11.8%</u>
	100.0%

Contains 7 Pounds of Active Ingredient Per Gallon



KEEP OUT OF REACH OF CHILDREN

CAUTION

Harmful if swallowed

STATEMENT OF PRACTICAL TREATMENT

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. If further treatment is required, contact a Poison Center, a physician, or the nearest hospital, or call collect, day or night: (203)226-6602 Stauffer Chemical Company or (800)424-9300 Pesticide Safety Team Network.

If swallowed: Immediately give several glasses of water but do not induce vomiting. If vomiting does occur, give fluids again. Have a physician determine if condition of patient will permit evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

For eye contact: Immediately flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart during flushing to ensure rinsing of the entire surface of the eye and lids with water. Get medical attention immediately.

For skin contact: Immediately flush all affected areas with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention if skin irritation occurs. Wash clothing before reuse.

If inhaled: Remove to fresh air. Seek medical attention if respiratory irritation occurs or if breathing becomes difficult.

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16 JAN 1986

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PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS AND DOMESTIC ANIMALS****C A U T I O N**

HARMFUL IF SWALLOWED. Avoid contact with skin, eyes and clothing. Avoid breathing spray mist. Wear goggles, rubber gloves and protective clothing. Wash skin with soap and water immediately after contact. Flush eyes with water.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. When applied through sprinkler irrigation method of application, the area being treated must be vacated by unprotected persons.

ENVIRONMENTAL HAZARDS: Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

Can be stored at temperatures as low as minus 50°F.

READ ALL LABEL DIRECTIONS BEFORE USING

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified: United States of America Patent No. 4,021,224; 4,137,070.

EPA Reg. No. 476-2049

5 Gal. Net 18.9 L

RS-850409

EPA Est. 476-

Made in U.S.A. by

STAUFFER CHEMICAL COMPANY
Westport, CT 06881-0851

Weeds Controlled By SUTAN+ 7-E

SUTAN+ 7-E will not control established weeds.

Annual Grasses:

Barnyardgrass, Watergrass (Echinochloa crus-galli)
 Crabgrass (Digitaria spp.)
 Fall Panicum (Panicum dichotomiflorum)
 Field Sandbur* (Cenchrus pauciflorus)
 Giant Foxtail (Setaria faberi)
 Green Foxtail (Setaria viridis)
 Goosegrass (Eleusine indica)
 Seedling Bermudagrass (Cynodon dactylon)
 Seedling Johnsongrass* (Sorghum halepense)
 Texas Panicum*+, Buffalograss, Coloradograss (Panicum texanum)
 Volunteer Sorghum* (Sorghum spp.)
 Wild Cane*, Shattercane, Black Amber Cane,
 Chicken Corn, Scatter Cane (Sorghum bicolor)-
 See Wild Cane Rate and Cultural Recommendations
 Yellow Foxtail (Setaria glauca)

*Cultivation is suggested in addition to the SUTAN+ 7-E treatment in fields with moderate to heavy infestations of wild cane, sandbur, johnsongrass seedlings, texas panicum, or volunteer sorghum.

+Southeast Region only.

Perennial Weeds:

Purple Nutgrass, Nutsedge (Cyperus rotundus)
 Rhizome Bermudagrass+ (Cynodon dactylon)
 Rhizome Johnsongrass* (Sorghum halepense)
 Yellow Nutgrass, Nutsedge (Cyperus esculencus)

*Partial control (suppression) only.

+Southeast Region only

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. Cultivation is suggested in addition to SUTAN+ 7-E treatment in fields with moderate to heavy nutgrass infestations.

NOTE: See special instructions under "Recommendations" for Johnsongrass and Rhizome Bermudagrass.

GENERAL USE PRECAUTIONS

Read all label directions before using.

Applied according to directions and under normal growing conditions, SUTAN+ 7-E will not harm the treated crop. During germination

and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil-applied systemic insecticides, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. SUTAN+ 7-E used under these abnormal conditions could result in crop injury.

When applied according to directions and when conditions exist for normal plant growth through the season, no harmful residues of SUTAN+ 7-E should remain beyond harvest. In the Southeastern U.S., when SUTAN+ 7-E is used for weed control in silage corn, do not seed small seeded grains after corn harvest until September.

Do not use on milo or sorghum. Do not use on corn seed stock (Breeders, Foundation, or Increase).

SUTAN+ 7-E is recommended for use on mineral soils only (soils containing less than 10% organic matter).

Do not contaminate irrigation water (used for crops other than corn) or water used for domestic purposes.

Do not contaminate food or feed.

Keep container closed when not in use. Do not store near seeds or fertilizers.

Do not use in Arizona or in the ten Southernmost California counties (except Kern County where field and silage corn may be treated).

In irrigated areas, do not apply SUTAN+ 7-E before pre-irrigation.

DIRECTIONS FOR USE OF SUTAN+ 7-E

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

SUTAN+ 7-E is a selective herbicide which is mixed (incorporated) or injected into the soil for control of weeds listed on this label. SUTAN+ 7-E controls annual grasses as their seeds germinate by interfering with normal germination and seedling development. It does not control established weeds. All weed growth and crop stubble should be thoroughly worked into the soil before treatment.

Combination With Fluid Fertilizers

SUTAN+ 7-E may be combined with fluid (solution, slurry, or suspension) fertilizers. However, physical compatibility with these fluid fertilizers must be determined before combining in the spray tank. See Appendix I! for directions regarding these combinations. Even though found to be compatible, constant agitation is necessary to keep the SUTAN+ 7-E evenly mixed with the fluid fertilizer during application.

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Impregnation On Dry Bulk Fertilizers

Dry bulk fertilizers (except nitrate fertilizers) may be impregnated or coated with SUTAN+ 7-E. However, uniform distribution of SUTAN+ 7-E on fertilizer particles and uniform application are necessary to assure good results. See Appendix IV for information and directions regarding impregnation and use for these combinations.

APPLICATION AND SOIL INCORPORATION DIRECTIONS

SPRAY APPLICATION AND MECHANICAL INCORPORATION

Pour the recommended amount of SUTAN+ 7-E into the spray tank during the filling operations. Apply in 10 to 50 gallons of water per acre using a properly calibrated, low-pressure type nozzle (flood, fan or swirl chamber) on boom type sprayer having good agitation (use the higher gallonage in arid areas). The soil should be well worked and dry enough to permit good soil mixing (incorporation).

INCORPORATION DIRECTIONS

See Appendix I for soil mixing (incorporation) before planting directions.

SUTAN+ 7-E must be incorporated into the soil immediately to prevent loss of the herbicide. Whenever possible, application and incorporation should be done in the same operation.

Loss of weed control will result from any delay in incorporation if SUTAN+ 7-E is applied to a moist soil surface.

If there must be a delay (less than one hour) in incorporation of the herbicide when application and incorporation are done in separate operations, SUTAN+ 7-E must be applied to a dry soil surface (at least 1/2 inch deep) and free from dew and incidental moisture.

IMPORTANT: Thorough mixing of SUTAN+ 7-E in the soil is necessary. The soil must be in good tilth. Improper disking or poor tilth (large clods) may result in unsatisfactory control.

Center Pivot Sprinkler Application

Apply SUTAN+ 7-E with irrigation water before planting (see PLANTING), or immediately after planting before either corn or weeds emerge. It is important that application be done immediately after the last tillage operation since poor results will occur if the weeds have germinated before application of the herbicide. Meter the SUTAN+ 7-E into the irrigation water during the entire period.

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SUTAN+ 7-E

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Apply in 1/2 to 1 inch of water or sufficient water to penetrate the soil to a depth of 5 to 7 inches. If diluted, SUTAN+ 7-E should be mixed at a volume ratio of no more than 1 part SUTAN+ 7-E to 4 parts of water or fluid fertilizer. Good agitation should be maintained during the entire application period.

USE PRECAUTIONS

- A. Apply the product only through center pivot irrigation systems containing anti-siphon and check valves which will prevent water source contamination and overflow of the slurry tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.
- B. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.
- C. Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.
- D. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

Subsurface Application Before or at Planting (Limit use to the Southeastern U.S. only)

Special equipment designed for subsurface application must be used. Injector units must be rigidly mounted on, immediately ahead of, or immediately behind the planter unit.

Soil Injection: Coulters and injector shanks must be spaced 3-1/2 inches apart. The two shanks adjacent to the drill row must be 1-3/4 to 2 inches on either side of it. Mount injectors in staggered positions to avoid trash buildup. Set injectors to inject SUTAN+ 7-E 3 inches below the soil surface. The width of the band in which weed control is desired will determine the number of injectors required per row. (Example: Four injectors spaced 3-1/2 inches apart give a 14 inch band). A broadcast application can be made by increasing the number of shanks. Seal injector openings by using a roller or chain drag behind the injectors. Apply the recommended rate of SUTAN+ 7-E in 20 to 50 gallons of water per acre.

For band applications, calculate the amount to be applied per acre as follows:

$\frac{\text{Band Width}}{\text{In Inches}} \times \text{Rate/A For Broadcast Treatment} = \text{Amount Needed For Band Treatment}$	X	-
$\frac{\text{Distance Between Rows}}{\text{In Inches}}$		

SUTAN+ 7-E

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PLANTING

Plant seed to a maximum depth of 2 inches. Seeding can be done immediately or it may be delayed up to 2 weeks*. To avoid removing SUTAN+ 7-E from the row (with loss of weed control in the row), do not move or shape soil after treatment, such as by planting in deep furrows.

* For Wild Cane - See Special Recommendations.

CULTURAL PRACTICES FOLLOWING APPLICATION

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow, i.e., no more than 1/2 the depth the herbicide was incorporated or injected. A sequential application of 2,4-D or BANVEL 4E* may be necessary to control weeds resistant to SUTAN+ 7-E.

Under circumstances when a poor stand of corn is obtained after SUTAN+ 7-E treatment (caused by flooding, disease, etc.) corn can be planted again without working the field.

* Registered Trademark of Velsicol Chemical Corporation

RECOMMENDATIONS

For all uses, cultivation is recommended in addition to SUTAN+ 7-E treatment in fields with moderate to heavy infestations of wild cane, nutgrass, sandbur, johnsongrass seedlings, rhizome bermudagrass, Texas panicum or volunteer sorghum.

Broadcast Rates Per Acre (Conventional sprays and center pivot sprinklers).

For control of most annual grasses: Use 4-1/2 pints of SUTAN+ 7-E per acre.

For control of nutsedge and Texas panicum (in addition to the other annual grasses listed): Use 4-1/2 to 7 pints of SUTAN+ 7-E per acre. Use the higher rates on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine textured clay) soils and for heavy infestations.

For Control of Wild Cane (in addition to the annual grasses listed): When applied and incorporated immediately before planting, Sutan+ 7-E at the rate of 7 pints per acre on a broadcast basis will reduce competition from wild cane. On continuous corn acreage with high cane seed population, rotation to another crop is recommended.

Suppression of wild cane may be improved if all the following practices are followed:

1. Fall or Spring Moldboard Plow.
2. Before application, the soil should be well worked with a disc and dry enough to permit good soil mixing of the herbicide (incorporation). All trash should be worked into the soil.
3. Delay application until soil warms to a constant 55 degrees or greater temperature. Plant immediately.
4. Incorporate thoroughly. Use recommended incorporation equipment and procedures found on this label.
5. Cultivate immediately if wild cane emerges. Cultivation should be shallower than the depth used when incorporating the herbicide.

For control of Johnsongrass and Bermudagrass (in addition to the annual grasses listed): Apply and disc-incorporate SUTAN+ 7-E just before planting at the rate of 4-1/2 to 7 pints per acre. Use the higher rates of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine textured-clay) soils, for rhizome johnsongrass suppression, rhizome bermudagrass, and for heavy infestations. Disc a second time at right angles to the first. Cultivate at least once, preferably twice.

Johnsongrass: Using a program of plowing and discing followed by SUTAN+ 7-E will give good control of seedlings and greatly reduce competition from plants coming from rhizomes.

In some areas discing 2 to 3 times spaced at 4 to 6 week intervals during fall and winter can be done. If this cannot be done, start with fall plowing followed by several discings in the spring before planting. The discing cuts rhizomes into small pieces and brings them to the surface, where both the weather and SUTAN+ 7-E will kill or weaken them.

Rhizome bermudagrass: The rhizomes and stolons of bermudagrass must be cut so thoroughly so that four or less nodes remain on a strand. For control of bermudagrass, the disc must be set to cut 6 inches deep.

Subsurface Injection Application (Limit use to the Southeastern U.S. only) Use 3-1/2 pints SUTAN+ 7-E per broadcast acre, reducing the dosage proportionately depending upon the row spacing and band width to be treated.

SUTAN+ 7-E/ATRAZINE (80W or 4L) TANK MIX DIRECTIONS

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Fall Application: For use only in Minnesota, Northern Iowa (North of Interstate 80), Northeast Nebraska (North of Interstate 80 and East of State Highway 14), South Dakota (East of Missouri River), Wisconsin and Northern Illinois (North of Interstate 80). Apply and incorporate 7 pints SUTAN+ 7-E per acre in the late fall before the ground freezes.

NOTE: Do not use fall application for control of wildcane.

SUTAN+ 7-E/ATRAZINE (80W or 4L) TANK MIX DIRECTIONS

A tank mix combination of SUTAN+ 7-E and ATRAZINE can be applied and mixed into the soil before planting for weed control in corn. This combination will control a broader spectrum of weeds than will either material used alone. In addition, potential hazard of ATRAZINE residues affecting certain succeeding crops is reduced because a lower rate of ATRAZINE can be used when it is combined with SUTAN+ 7-E than when it is used alone.

- . FOLLOW ALL USE PRECAUTIONS AND WARNINGS THAT APPEAR ON THE ATRAZINE LABEL, SUPPLEMENTARY ATRAZINE LITERATURE AND ELSEWHERE ON THIS LABEL.
- . MAKE ONLY ONE APPLICATION PER CROP. AFTER TREATMENT WITH SUTAN+ 7-E/ATRAZINE COMBINATION, DO NOT PLANT ANY CROP EXCEPT CORN UNTIL THE FOLLOWING YEAR OR INJURY MAY OCCUR.

WEEDS CONTROLLED BY SUTAN+ 7-E/ATRAZINEAnnual Grasses:

Barnyardgrass, Watergrass (Echinochloa crus-galli)
 Broadleaf Signalgrass** (Brachiaria platyphylla)
 Crabgrass (Digitaria spp.)
 Fall Panicum (Panicum dichotomiflorum)
 Field Sandbur* (Cenchrus pauciflorus)
 Giant Foxtail (Setaria faberi)
 Green Foxtail (Setaria viridis)
 Goosegrass (Eleusine indica)
 Seedling Bermudagrass (Cynodon dactylon)
 Seedling Johnsongrass* (Sorghum halepense)
 Texas Panicum**, Buffalograss, Coloradograss (Panicum texanum)
 Volunteer Sorghum* (Sorghum spp.)
 Wild Cane*, Shattercane, Black Amber Cane,
 Chicken Corn, Scatter Cane (Sorghum bicolor)-
 See Wild Cane Rate and Cultural Recommendations

SUTAN+ 7-E/ATRAZINE TANK MIX DIRECTIONS

- Wild Oats (Avena fatua)
- Witchgrass (Panicum capillare)
- Yellow Foxtail (Setaria glauca)

†Partial control (suppression) only.

*Cultivation is suggested in addition to the SUTAN+ 7-E/ ATRAZINE treatment in fields with moderate to heavy infestations of wild cane, sandbur, johnsongrass, Texas panicum, volunteer sorghum, or broadleaf signalgrass.

+Southeast Region only

Annual Broadleaf Weeds:

- Annual Morningglory (Ipomoea purpurea)
- Carpetweed (Mollugo verticillata)
- Common Cocklebur (Xanthium pensylvanicum)
- Common Lambsquarters (Chenopodium album)
- Common Purslane (Portulaca oleracea)
- Florida Purslane (Richardia scabra)
- Jimsonweed (Datura stramonium)
- Mustards (Brassica spp.)
- Nightshade (Solanum spp.)
- Prostrate Pigweed (Amaranthus graecizans)
- Ragweed (Ambrosia spp.)
- Redroot Pigweed (Amaranthus retroflexus)
- Smartweed (Polygonum spp.)
- Smooth Pigweed (Amaranthus hybridus)
- Velvetleaf (Abutilon theophrasti)

Perennial Weeds:

- Purple Nutgrass, Nutsedge (Cyperus rotundus)
- Rhizome Bermudagrass+ (Cynodon dactylon)
- Rhizome Johnsongrass* (Sorghum halepense)
- Yellow Nutgrass, Nutsedge (Cyperus esculentus)

*Partial control (suppression) only.

+Southeast Region only.

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. Cultivation is suggested in addition to SUTAN+ 7-E/ATRAZINE treatment in fields with moderate to heavy nutgrass infestations.

SUTAN+ 7-E/ATRAZINE TANK MIX DIRECTIONS

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DIRECTIONS FOR USE

The SUTAN+ 7-E/ATRAZINE (80W or 4L) combination can be mixed with water or combined with fluid (solution, slurry, or suspension) fertilizers and applied as a spray, or be impregnated on dry bulk fertilizers.

SUTAN+ 7-E/ATRAZINE (80W or 4L) tank mix.

See Appendix III for Tank Mix Directions.

SUTAN+ 7-E/ATRAZINE (80W or 4L) fluid fertilizer tank mix.

The SUTAN+ 7-E/ATRAZINE (80W or 4L) combination can be combined with fluid fertilizers for applications made before planting. However, the physical compatibility with these fluid fertilizers must be determined before combining in the spray tank, and even though found to be compatible, constant agitation is necessary to keep the SUTAN+ 7-E/ATRAZINE evenly mixed with the fluid fertilizer during application.

Refer to Appendix II regarding the procedure for testing the compatibility of SUTAN+ 7-E/ATRAZINE combination with fluid fertilizers.

Impregnation on dry bulk fertilizers

Dry bulk fertilizers (except single superphosphate, treble superphosphate and nitrate fertilizers) may be impregnated or coated with SUTAN+ 7-E/ ATRAZINE (80W or 4L). However, uniform distribution of SUTAN+ 7-E/ ATRAZINE (80W or 4L) on fertilizer particles and uniform application are necessary to assure good results. See Appendix IV for information and directions for impregnation and use for these combinations.

APPLICATION AND SOIL INCORPORATION DIRECTIONSSPRAY APPLICATION AND MECHANICAL INCORPORATION

Apply the recommended dosage in 10 to 50 gallons of water per acre (use the higher gallonage in arid areas) using a properly calibrated, low-pressure type nozzle (flood, fan or swirl chamber) on boom-type sprayer having good, but not excessive agitation. Check frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern. Read directions on ATRAZINE label concerning nozzle and screen sizes.

The herbicides must be incorporated into the soil immediately after application to prevent loss of the SUTAN+ 7-E. Whenever possible, application and incorporation should be done in the same operation. Apply the herbicides to well-worked soil, dry enough to permit good soil mixing.

SUTAN+ 7-E/ATRAZINE TANK MIX DIRECTIONS

12.

See Appendix I for Soil Mixing (incorporation) before Planting Directions.

Loss of weed control will result from any delay in incorporation if SUTAN+ 7-E is applied to a moist soil surface.

If there must be a delay (less than one hour) in incorporation of the herbicides when application and incorporation are done in separate operations, SUTAN+ 7-E must be applied to a dry soil surface (at least 1/2 inch deep) and free from dew and incidental moisture.

IMPORTANT: Thorough mixing of SUTAN+ 7-E in the soil is necessary. The soil must be in good tilth. Improper discing or poor tilth (large clods) may result in unsatisfactory control.

CENTER PIVOT SPRINKLER APPLICATION

Apply SUTAN+ 7-E/ATRAZINE with irrigation water before planting (see PLANTING), or immediately after planting before either corn or weeds emerge. It is important that application be done immediately after the last tillage operation since poor results will occur if the weeds have germinated before application of the herbicide. Meter the pre-mixed SUTAN+ 7-E/ATRAZINE into the irrigation water during the entire period. Apply in 1/2 to 1 inch of water or sufficient water to penetrate the soil to a depth of 5 to 7 inches. Good agitation of the pre-mixed SUTAN+ 7-E/ATRAZINE should be maintained during the entire application period. See Appendix III for tank mixing directions for SUTAN+ 7-E with ATRAZINE.

USE PRECAUTIONS:

- A. Apply the product only through center pivot irrigation systems containing anti-siphon and check valves which will prevent water source contamination and overflow of the slurry tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.
- B. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.
- C. Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.
- D. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

SUTAN+ 7-E/ATRAZINE TANK MIX DIRECTIONS

13.

PLANTING

Do not plant seed deeper than 2 inches. For a SUTAN+ 7-E/ ATRAZINE application made before planting, seeding can be done immediately, or it may be delayed up to 2 weeks. To avoid removing SUTAN+ 7-E/ ATRAZINE from the row (with loss of weed control in the row), do not move or shape soil after treatment, such as by planting in deep furrows. If it is necessary to work the soil following application and incorporation but before planting, do not work the soil deeper than the depth the herbicides were incorporated.

Do not use on milo or sorghum.

Do not use on corn seed stock (Breeders, Foundation, or Increase).

RECOMMENDATIONS

NOTE: The SUTAN+ 7-E/ATRAZINE tank mix combination is not recommended on corn grown in Arizona or in the ten Southernmost California counties.

For all uses, cultivation is recommended in addition to the SUTAN + 7-E/ATRAZINE treatment in fields with moderate to heavy infestations of wild cane, nutgrass, sandbur, johnsongrass seedlings, rhizome bermudagrass, Texas panicum or volunteer sorghum.

Broadcast Rates Per Acre (Conventional sprays and center pivot sprinklers)

For control of annual grasses and broadleaf weeds: Use 3-1/2 to 4-1/2 pints SUTAN+ 7-E and 1-1/4 to 2* pounds of ATRAZINE 80W or 1 to 1-1/2* quarts ATRAZINE 4L per acre. Use the higher rate of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) to fine (fine textured-clay) soils and for sandbur and johnsongrass seedling control.

For control of nutsedge and Texas panicum (in addition to the broadleaf weeds and other annual grasses listed): Use 4-1/2 to 7 pints of SUTAN+ 7-E and 1-1/4 to 2* pounds ATRAZINE 80W or 1 to 1-1/2* quarts ATRAZINE 4L per acre. Use the higher rates of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine textured-clay) soils and for heavy infestations.

For Control of Wild Cane: (In addition to the broadleaf weeds and annual grasses listed): When applied and incorporated immediately before planting, Sutan+ 7-E at the rate of 7 pints and 1-1/4 to 2* pounds of Atrazine 80-W or 1 to 1-1/2* quarts Atrazine 4-L per acre will reduce competition from Wild Cane. On continuous corn acreage with high cane seed population, rotation to another crop is recommended.

NOTE: See preceding SUTAN+ 7-E section for wild cane

For control of Johnsongrass and Bermudagrass (in addition to the broadleaf weeds and annual grasses listed): Apply and disc-incorporate SUTAN+ 7-E just before planting at the rate of 4-1/2 to 7 pints plus 1-1/4 to 2* pounds of ATRAZINE 80W or 1 to 1-1/2* quarts of ATRAZINE 4L per acre. Use the higher rate of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine textured-clay) soils, for rhizome johnsongrass suppression and for heavy infestations. Disc a second time at right angles to the first. Cultivate at least once, preferably twice.

Johnsongrass: Using a program of plowing and discing followed by SUTAN+ 7-E and ATRAZINE will give good control of seedlings and greatly reduce competition from plants coming from rhizomes.

In some areas discing 2 to 3 times spaced at 4 to 6 week intervals during fall and winter can be done. If this cannot be done, start with fall plowing followed by several discings in the spring before planting. The discing cuts rhizomes into small pieces and brings them to the surface, where both the weather and SUTAN+ 7-E will kill or weaken them.

Rhizome Bermudagrass: The rhizomes and stolons of bermudagrass must be cut up thoroughly so that four or less nodes remain on a strand. For control of bermudagrass, the disc must be set to cut 6 inches deep.

*Use the higher rate of ATRAZINE on soils with over 5% organic matter.

For Suppression of Broadleaf Signalgrass: For early and mid season suppression, use 7 pints of SUTAN+ 7-E and 1-1/4 to 2 pounds ATRAZINE 80-W or 1 to 1-1/2 quarts ATRAZINE 4-L per acre. Cultivation or application of a post-emergence herbicide recommended for broadleaf signalgrass will aid in extending control to late season.

Fall Application: For use only in Minnesota, Northern Iowa (North of Interstate 80), Northeast Nebraska (North of Interstate 80 and East of State Highway 14), South Dakota (East of Missouri River), Wisconsin and Northern Illinois (North of Interstate 80). Apply and incorporate 7 pints SUTAN+ 7-E and 2 pounds ATRAZINE 80W or 1-1/2 quarts ATRAZINE 4L per acre in the late fall before the ground freezes.

NOTE: Do not use Fall application for control of wild cane.

CULTURAL PRACTICES FOLLOWING APPLICATION

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow; i.e., no more than 1/2 the depth the herbicide was incorporated.

SUTAN+ 7-E/BLADEX* (80W or 4L) combination

*BLADEX is the registered Trademark of Shell Chemical Company

GENERAL INFORMATION

SUTAN+ 7-E may be used in combination with BLADEX (80W or 4L) for weed control in corn. These combinations will control a broader spectrum of weeds than will either of the products used alone.

These combinations may be applied as a tank mix, preplant and soil-incorporated; or the BLADEX (80W or 4L) may be applied preemergence following a pre-plant incorporated application of SUTAN+ 7-E.

IMPORTANT: Observe all cautions and limitations on the BLADEX (80W or 4L) and SUTAN+ 7-E labels.

Make only one application per crop.

Do not use on milo or sorghum. Do not use on corn seed stock (Breeder's, Foundation, or Increase).

Do not contaminate water by cleaning of equipment or disposal of wastes.

WEEDS CONTROLLED BY SUTAN+ 7-E/BLADEXAnnual Grasses:

Annual Bluegrass (Poa annua)
 Annual Fescues (Festuca spp.)
 Annual (Italian) Ryegrass (Lolium multiflorum)
 Barnyardgrass, Watergrass (Echinochloa Crus-galli)
 Bullgrass (Paspalum boscianum)
 Crabgrass (Digitaria spp.)
 Fall Panicum (Panicum dichotomiflorum)
 Field Sandbur* (Cenchrus pauciflorus)
 Giant Foxtail (Setaria faberi)
 Goosegrass (Eleusine indica)
 Green Foxtail (Setaria viridis)
 Indian Lovegrass (Eragrostis pilosa)
 Junglerice (Echinochloa colonum)
 Seeding Bermudagrass (Cynodon dactylon)
 Seeding Johnsongrass* (Sorghum halepense)
 Stinkgrass (Eragrostis cilianensis)
 Texas Panicum*+, Buffalograss, Coloradograss (Panicum texanum)
 Volunteer Sorghum* (Sorghum spp.)
 Wild Cane*, Shattercane, Black Amber Cane,
 Chicken Corn, Scatter Cane (Sorghum bicolor)-
 See Wild Cane Rate and Cultural Recommendations.

Wild Oat (Avena fatua)
 Witchgrass (Panicum capillare)
 Yellow Foxtail (Setaria glauca)

*Cultivation is suggested in addition to the SUTAN+ 7-E/BLADEX treatment in fields with moderate to heavy infestations of wild cane, sandbur, Texas panicum, johnsongrass seedlings, or volunteer sorghum.

+Southeast Region only

Annual Broadleaf Weeds:

Annual Buttercup (Ranunculus spp.)
 Annual Groundcherry (Physalis lanceifolia)
 Annual Morningglory (Ipomoea purpurea)
 Annual Sedge (Carex spp.)
 Black Mustard (Brassica nigra)
 Buffalobur (Solanum rostratum)
 Carpetweed (Mollugo verticillata)
 Common Chickweed (Stellaria media)
 Common Cocklebur (Xanthium pensylvanicum)
 Common Groundsel (Senecio vulgaris)
 Common Lambsquarters (Chenopodium album)
 Common Mallow (Malva neglecta)
 Common Purslane (Portulaca oleracea)
 Corn Spurry (Spergula arvensis)
 Floras Paintbrush (Emilia sagittata)
 Florida Pusley (Richardia scabra)
 Hedge Mustard (Sisymbrium officinale)
 Jimsonweed (Datura stramonium)
 Kochia (Kochia scoparia)
 Mayweed (Anthemis cotula)
 Pennsylvania Smartweed (Polygonum pensylvanicum)
 Pigweed (Amaranthus spp.)
 Pineappleweed (Matricaria matricarioides)
 Plantain (Plantago spp.)
 Poorjoe (Diodia teres)
 Prostrate Knotweed (Polygonum aviculare)
 Prostrate Spurge (Euphorbia supina)
 Ragweed (Ambrosia spp.)
 Seedling Curly Dock (Rumex crispus)
 Shepherdspurse (Capsella bursa-pastoris)
 Smallflower Galinsoga (Galinsoga parviflora)
 Prickly Sida (Sida spinosa)
 Tarweed (Hemizonia congesta)
 Velvetleaf (Abutilon theophrasti)
 Wild Buckwheat (Polygonum convolvulus)
 Wild Mustard (Brassica kaber)
 Wild Radish (Raphanus raphanistrum)
 Wild Turnip (Brassica campestris)

Perennial Weeds:

Rhizome Bermudagrass+ (Cynodon dactylon)
Rhizome Johnsongrass* (Sorghum halepense)
Purple Nutgrass, Nutsedge (Cyperus rotundus)
Yellow Nutgrass, Nutsedge (Cyperus esculentus)

*Partial control (suppression only)

+Southeast Region only

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. Cultivation is suggested in addition to SUTAN+ 7-E/BLADEX treatment in fields with moderate to heavy nutgrass infestations.

DIRECTIONS FOR USE

The SUTAN+ 7-E/BLADEX (80W or 4L) combination can be mixed with water or combined with fluid (solution, slurry, or suspension) fertilizers and applied as a spray, or it can be impregnated on dry bulk fertilizers.

TANK MIX DIRECTIONS: See Appendix III

Application and Incorporation Directions:

For a tank mix application, apply the recommended dosage (see RECOMMENDATIONS) in 10 to 50 gallons of water per acre (use the higher gallonage in arid areas) using a properly calibrated, low-pressure type nozzle (flood, fan or swirl chamber) or boom type sprayer having good agitation. Check frequently during application to be sure the nozzles are free from clogging and are delivering a uniform spray pattern. Read directions on the BLADEX (80W or 4L) label concerning nozzle and screen sizes.

The tank mix must be incorporated into the soil immediately after application to prevent loss of the SUTAN+ 7-E. Whenever possible, application and incorporation should be done in the same operation. Apply the herbicides to well-worked soil, dry enough to permit good soil mixing.

See Appendix I for Soil Mixing (incorporation) before Planting Directions.

Loss of weed control will result from any delay in incorporation if SUTAN+ 7-E is applied to a moist soil surface.

If there must be a delay (less than one hour) in incorporation of the herbicides when application and incorporation are done in separate operations, SUTAN+ 7-E must be applied to a dry soil surface (at least 1/2 inch deep) and free from dew and incidental moisture.

IMPORTANT: Thorough mixing of SUTAN+ 7-E in the soil is necessary. The soil must be in good tilth. Improper discing or poor tilth (large clods) may result in unsatisfactory control.

SUTAN+ 7-E/BLADEX (80W or 4L) Fluid Fertilizer Tank Mix

The SUTAN+ 7-E/BLADEX (80W or 4L) combination can be combined with fluid fertilizers for applications made before planting. However, the physical compatibility with these fluid fertilizers must be determined before combining in the spray tank, and even though found to be compatible, constant agitation is necessary to keep the SUTAN+ 7-E/BLADEX evenly mixed with the fluid fertilizer during application.

Refer to Appendix II regarding the procedure for testing the compatibility of SUTAN+ 7-E/BLADEX combination with fluid fertilizers.

Impregnation on Dry Bulk Fertilizers

Dry bulk fertilizers (except single superphosphate, treble superphosphate and nitrate fertilizers) may be impregnated or coated with SUTAN+ 7-E/BLADEX (80W or 4L). However, uniform distribution of SUTAN+ 7-E/BLADEX (80W or 4L) on fertilizer particles and uniform application are necessary to assure good results. See Appendix IV for information and directions for impregnation and use for these combinations.

For sequential application of SUTAN+ 7-E preplant incorporated followed by BLADEX (80W or 4L) pre-emergence, consult the appropriate application directions on the respective product labels. Follow the dosage recommendations given below.

RECOMMENDATIONS

For all uses, cultivation is recommended in addition to the SUTAN+ 7-E/BLADEX treatment in fields with moderate to heavy infestations of wild cane, nutgrass, sandbur, johnsongrass seedlings, rhizome bermudagrass, Texas panicum, or volunteer sorghum.

Broadcast Rates Per Acre (Conventional Sprays)

For control of annual grasses and broadleaf weeds: Use 3-1/2 to 4-1/2 pints of SUTAN+ 7-E and 2 to 2-1/2 pounds BLADEX 80W or 3 to 4 pints BLADEX 4L per acre. Use the higher rates of SUTAN + 7-E on medium (medium fine textured-silt loam, clay loam, etc.) to fine (fine textured-clay) soils and for sandbur and johnsongrass seedling control.

For control of nutsedge and Texas panicum (in addition to the broadleaf weeds and annual grasses listed): Use 4-1/2 to 7 pints of SUTAN+ 7-E and 2 to 2-1/2 pounds BLADEX 80W or 3 to 4 pints BLADEX 4L per acre.

Bullgrass (Paspalum boscianum)
 Crabgrass (Digitaria spp.)
 Fall Panicum (Panicum dichotomiflorum)
 Field Sandbur* (Cenchrus pauciflorus)
 Giant Foxtail (Setaria faberi)
 Goosegrass (Eleusine indica)
 Green Foxtail (Setaria viridis)
 Indian Lovegrass (Eragrostis pilosa)
 Junglerice (Echinochloa colonum)
 Seedling Bermudagrass (Cynodon dactylon)
 Seedling Johnsongrass* (Sorghum halepense)
 Stinkgrass (Eragrostis ciliaris)
 Texas Panicum*+, Buffalograss, Coloradograss (Panicum texanum)
 Volunteer Sorghum* (Sorghum spp.)
 Wild Cane*, Shattercane, Black Amber Cane,
 Chicken Corn, Scatter Cane (Sorghum bicolor)-
 See Wild Cane Rate and Cultural Recommendations.
 Wild Oats (Avena fatua)
 Witchgrass (Panicum capillare)
 Yellow Foxtail (Setaria glauca)

*Cultivation is suggested in addition to the SUTAN+ 7-E/ATRAZINE/BLADEX treatment in fields with moderate to heavy infestations of wild cane, sandbur, Texas panicum, johnsongrass seedlings, or volunteer sorghum.

+Southeast Region only.

Annual Broadleaf Weeds:

Annual Buttercup (Ranunculus spp.)
 Annual Groundcherry (Physalis lanceifolia)
 Annual Morningglory (Ipomoea purpurea)
 Annual Sedge (Carex spp.)
 Buffalobur (Solanum rostratum)
 Carpetweed (Mollugo verticillata)
 Common Chickweed (Stellaria media)
 Common Cocklebur (Xanthium pensylvanicum)
 Common Groundsel (Senecio vulgaris)
 Common Lambsquarters (Chenopodium album)
 Common Mallow (Malva neglecta)
 Common Purslane (Portulaca oleracea)
 Corn Spurry (Spergula arvensis)
 Floras Paintbrush (Emilia sagittata)
 Florida Pusley (Richardia scabra)
 Hedge Mustard (Sisymbrium officinale)
 Jimsonweed (Datura stramonium)
 Kochia (Kochia scoparia)
 Mayweed (Anthemis cotula)
 Mustards (Brassica spp.)
 Nightshade (Solanum spp.)
 Pigweed (Amaranthus spp.)
 Pineappleweed (Matricaria matricarioides)
 Plantain (Plantago spp.)

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SUTAN+ 7-E/ATRAZINE/BLADEX TANK MIX

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Poorjoe (Diodia teres)
Prostrate Knotweed (Polygonum aviculare)
Prostrate Spurge (Euphorbia supina)
Ragweed (Ambrosia spp.)
Seedling Curly Dock (Rumex crispus)
Shepherdspurse (Capsella bursa-pastoris)
Smallflower Galinsoga (Galinsoga parviflora)
Smartweed (Polygonum spp.)
Prickly Sida (Sida spinosa)
Tarweed (Hemizonia congesta)
Velvetleaf (Abutilon theophrasti)
Wild Buckwheat (Polygonum convolvulus)
Wild Radish (Raphanus raphanistrum)
Wild Turnip (Brassica campestris)

Perennial Weeds:

Rhizome Bermudagrass+ (Cynodon dactylon)
Purple Nutgrass, Nutsedge (Cyperus rotundus)
Yellow Nutgrass, Nutsedge (Cyperus esculentus)
Rhizome Johnsongrass* (Sorghum halepense)

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. Cultivation is suggested in addition to SUTAN+ 7-E/ATRAZINE/BLADEX treatment in fields with moderate to heavy nutgrass infestations.

*Partial Control (Suppression) only.
+Southeast Region only.

DIRECTIONS FOR USE

The SUTAN+ 7-E/ATRAZINE/BLADEX (80W or 4L) combination can be mixed with water and applied as a spray.

TANK MIX DIRECTIONS: see Appendix III.

Application and Incorporation Directions:

For a tank mix application, apply the recommended dosage (see RECOMMENDATIONS) in 10 to 50 gallons of water per acre (use the higher gallonage in arid areas) using a properly calibrated, low-pressure type nozzle (flood, fan or swirl chamber), on boom-type sprayer having good, but not excessive agitation. Check frequently during application to be sure the nozzles are free from clogging and are delivering a uniform pattern. Read directions on the ATRAZINE and BLADEX (80W or 4L) labels concerning nozzle and screen sizes.

The tank mix must be incorporated into the soil immediately after application to prevent loss of the SUTAN+ 7-E. Whenever possible, application and incorporation should be done in the same operation. Apply the herbicides to well-worked soil, dry enough to permit good soil mixing.

See Appendix I for Soil Mixing (incorporation) before Planting Directions.

Loss of weed control will result from any delay in incorporation if SUTAN+ 7-E is applied to a moist soil surface.

If there must be a delay (less than one hour) in incorporation of the herbicides when application and incorporation are done in separate operations, SUTAN+ 7-E must be applied to a dry soil surface (at least 1/2 inch deep) and free from dew and incidental moisture.

IMPORTANT: Thorough mixing of SUTAN+ 7-E in the soil is necessary. The soil must be in good tilth. Improper discing or poor tilth (large clods) may result in unsatisfactory control.

PLANTING

Do not plant seed deeper than 2 inches for a SUTAN+ 7-E/ATRAZINE/BLADEX application made before planting. Seeding can be done immediately or it may be delayed up to 2 weeks. To avoid removing SUTAN+ 7-E/ATRAZINE/BLADEX from the row (with loss of weed control in the row), do not move or shape soils after treatment, such as by planting in deep furrows. If it is necessary to work the soil

should be shallow, that is, no more than 1/2 the depth the herbicide was incorporated.

RECOMMENDATIONS

NOTE: The SUTAN+ 7-E/ATRAZINE BLADEX tank mix combination is not recommended on corn grown in Arizona or in the ten Southernmost California counties.

For all uses, cultivation is recommended in addition to the SUTAN+ 7-E/ATRAZINE/BLADEX treatment in fields with moderate to heavy infestations of wild cane, nutgrass, sandbur, johnsongrass seedlings, rhizome bermudagrass, Texas panicum, or volunteer sorghum.

Broadcast Rates Per Acre

For control of annual grasses and broadleaf weeds: Use 3-1/2 to 4-1/2 pints of SUTAN+ 7-E, 1-1/4 pounds ATRAZINE 80-W or 1 quart ATRAZINE 4L, and 2 pounds BLADEX 80W or 3 pints BLADEX 4L per acre. Use the higher rate of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) to fine (fine textured-clay) soils and for sandbur and johnsongrass seedling control.

For control of nutgrass and Texas panicum: (In addition to the broadleaf weeds and annual grasses listed): Use 4-1/2 to 7 pints of SUTAN+ 7-E, 1-1/4 pounds ATRAZINE 80W or 1 quart ATRAZINE 4L, and 2 pounds BLADEX 80W or 3 pints BLADEX 4L per acre. Use the higher rates of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine textured-clay) soils and for heavy infestations.

For Control of Wild Cane: (In addition to the broadleaf weeds and annual grasses listed): When applied and incorporated immediately before planting, SUTAN+ 7-E at the rate of 7 pints and 1-1/4 pounds of Atrazine 80-W or 1 quart Atrazine 4-L and 2 pounds BLADEX 80-W or 3 pints BLADEX 4-L per acre will reduce competition from wild cane. On continuous corn acreage with high cane seed population, rotation to another crop is recommended.

NOTE: See preceding SUTAN+ 7-E section for wild cane supplemental cultural and tillage practices.

For control of Johnsongrass and Bermudagrass (in addition to the broadleaf weeds and annual grasses listed): Apply and disc-incorporate SUTAN+ 7-E just before planting at the rate of 4-1/2 to 7 pints, plus 1-1/4 pounds of ATRAZINE 80W or 1 quart of ATRAZINE 4L, plus 2 pounds of BLADEX 80W or 3 pints of BLADEX 4L per acre. Use the higher rates of SUTAN+ 7-E on medium (medium fine textured-silt loam, clay loam, etc.) soils, fine (fine texturedclay) soils, for rhizome johnsongrass suppression and for heavy infestations. Disc a second time at right angles to the first. Cultivate at least once, preferably twice.

Rhizome Bermudagrass: The rhizomes and stolons of bermudagrass must be cut up thoroughly so that four or less nodes remain on a strand. For control of bermudagrass, the disc must be set to cut 6 inches deep.

Johnsongrass: Using a program of plowing and discing followed by SUTAN+ 7-E/ATRAZINE/BLADEX will give good control of seedlings and greatly reduce competition from plants coming from rhizomes.

In some areas discing 2 to 3 times spaced at 4 to 6 weeks intervals during fall and winter can be done. If this cannot be done, start with fall plowing followed by several discings in the spring before planting. The discing cuts rhizomes into small pieces and brings them to the surface, where both the weather and SUTAN+ 7-E will kill or weaken them.

NOTE: BLADEX in combination with SUTAN+ 7-E and ATRAZINE is not recommended for use on coarse or medium textured soils containing less than 1% organic matter.

CULTURAL PRACTICES FOLLOWING APPLICATION

Should weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. When cultivating for any reason, it should be shallow; i.e., no more than 1/2 the depth the herbicide was incorporated.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

STORAGE: Keep container tightly closed when not in use. Do not store near seeds, fertilizers or foodstuffs. Store out of reach of children, pets and domestic animals. Can be stored at temperatures as low as minus 50°F.

PESTICIDE DISPOSAL: Rinse spray equipment. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Metal - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE - READ CAREFULLY

CONDITIONS OF SALE: Stauffer (and seller) offer(s) this product for sale subject to, and buyer and all users are deemed to have accepted, the following conditions of sale and warranty which may only be varied by written agreement of a duly authorized representative of Stauffer.

WARRANTY LIMITATION: Stauffer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the directions for use on the label subject to the inherent risks referred to below. Stauffer makes no other express warranties: THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY and there are no warranties which extend beyond the description on the label hereof.

INHERENT RISKS: The directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks associated with use. Buyer assumes all risks associated with use or application of this

LIMITATION OF LIABILITY: In no case shall Stauffer be liable for special, indirect, or consequential damages resulting from the use or handling of this product and no claim of any kind shall be greater in amount than the purchase price of the product in respect of which such damages are claimed.

APPENDIX I

SOIL MIXING (INCORPORATION) BEFORE PLANTING DIRECTIONS

The following equipment commonly is used for soil mixing (incorporation) before planting.

Power-Driven Cultivation Equipment (recommended on all soil types previously primary tilled): All PTO driven cultivation tools must be adjusted so as to have a tillage action speed (originating from internal gears and/or tractor gear) synchronized to the tractor's forward speed so that thorough soil mixing is obtained.

- a. Horizontal axis of rotation: set to cut 2 to 3 inches deep.
- b. Vertical axis of rotation: set to cut 6 to 8 inches deep.

Tandem discs (recommended on all soil types): Set to cut to a depth of 4 to 6 inches, operated at 4 to 6 mph followed by a spiked-tooth harrow or some other leveling device which extends beyond the ends of the discs. For more thorough mixing (for control of deep-germinating grasses - wild cane, seedling johnsongrass and nutsedge), disc in two different directions. When discing the second time, the disc should be reset to cut no deeper than 4 to 6 inches.

Field cultivator (recommended on lighter soils in good tilth): Use 3 to 4 rows of sweeps spaced at 7 inch or less intervals and staggered so that no soil is left unturned, followed by a spiked-tooth harrow pulled behind the cultivator. Do not use chisels or points. Set the cultivator to cut 4 to 6 inches deep, operated at 5 mph or more. The field cultivator should not be used alone as an incorporation tool where control of deep germinating weeds such as nutgrass, johnsongrass seedlings or wild cane is desired. For control of these weeds, use a disc alone for at least one of the passes over the field.

Procedure For Testing The Compatibility Of SUTAN+ 7-E
With Fluid Fertilizer

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APPENDIX II

PROCEDURE FOR TESTING THE COMPATIBILITY OF SUTAN+ 7-E or SUTAN+ 7-E/ATRAZINE (80W or 4L) or SUTAN+ 7E/BLADEX (80W or 4L) with fluid fertilizers.

The following procedure is suggested for determining whether SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE (80W or 4L) or SUTAN+ 7-E/ BLADEX (80W or 4L) may be combined with a specific fluid fertilizer for spray tank application.

MATERIALS REQUIRED:

1. A. SUTAN+ 7-E
B. or SUTAN+ 7-E/ATRAZINE (80W or 4L) combination
C. or SUTAN+ 7-E/BLADEX (80W or 4L) combination.
2. Fluid fertilizer to be used.
3. Adjuvant for fertilizer tank mix: Compex*, Sponto 168-D*, Uni-Mix*, Unite* or equivalent. The adjuvant which provides the best emulsification depends on the specific fertilizer under consideration.

*Compex, Kalo Laboratories Inc., Kansas City, Missouri; Sponto 168-D, Witco Chemical Company, Houston, Texas; Uni-Mix, Thompson-Hayward Chemical Co., Kansas City, Kansas; Unite, Hopkins Agricultural Chemical Company, Madison, Wisconsin.

4. Two one-quart, wide-mouth glass jars with lid or stopper.
5. Measuring spoons (a graduated pipette or cylinder will provide more accurate measurement; 1 tablespoon equals 3 teaspoons, 1 teaspoon equals approximately 5 ml).
6. Measuring cup, 8 oz. (237 ml).

PROCEDURE:

1. Pour a pint (473 ml) of the fluid fertilizer into each of the quart jars.
2. Add adjuvant to one of the jars and mix (see next rate table).
3. Add the SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE or SUTAN+ 7-E/ BLADEX combination to both jars (see next three rate tables).
4. Close both jars with lid or stopper and mix the contents by turning the jars upside down ten times.
5. Inspect the surface and body of the mixtures -

Procedure For Testing The Compatibility Of SUTAN+ 7-E
With Fluid Fertilizers - Continued

- (A) Immediately after completing the jar inversions.
- (B) After allowing the jars to stand quietly for 30 minutes.
- (C) And then again after repeating the jar inversions.

A mixture may be incompatible if either of the following conditions is observed at either inspection period:

- (1) An oil layer or large oil globules are seen at the surface of the mixture.
- (2) Clumps or aggregates are present.

If a uniform mix cannot be made, the mixture should not be used. If either mixture remains uniform for 30 minutes, the combination may be used. If the mixture with adjuvant stays mixed, but the mixture without adjuvant does not, be sure to use the adjuvant in the spray tank.

Should either mixture separate after 30 minutes, but remix readily and uniformly with 10 jar inversions, the mixture can be used if good agitation is maintained in the tank. If nondispersible oil, sludge or clumps of solids form, the mixture should not be used.

If the SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE (80-W or 4-L) or SUTAN+ 7-E/ BLADEX (80-W or 4-L) is incompatible with the fertilizer, carefully inspect the mixture containing the adjuvant. If this mixture is compatible, then the SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE (80-W or 4-L) or SUTAN+ 7-E/ BLADEX (80-W or 4-L) may be used with the fluid fertilizer provided that the adjuvant is added to the fluid fertilizer and thoroughly mixed before the herbicides are added. Add the adjuvant at a rate of 3 pints per 100 gallons of fluid fertilizer. Minimize foaming by using moderate agitation.

If the mixtures with the adjuvant are also incompatible, they should not be used in the same tank with the fertilizer.

Rate Table for SUTAN+ 7-E and Adjuvant**
with the Fluid Fertilizer

Gallons of Fluid Fertilizer to be applied per acre	ml. or tsp. of SUTAN+ 7-E* to be added to 1 pint of Fertilizer	
	ml.	tsp.
10	6-3/4	1 1/3
15	4-1/2	1
20	3-1/3	2/3
25	2-2/3	1/2
30	2-1/4	1/2
40	1-2/3	1/3

Procedure For Testing The Compatibility of SUTAN+ 7-E
With Fluid Fertilizer - Continued

- * Based on field rate of 1 pound active ingredient per acre in the fertilizer volumes indicated. Increase volume proportionately to correspond with intended field rate in terms of pounds active ingredient per acre (e.g. for field rate of 4 pounds actual SUTAN+ 7-E in 30 gallons fertilizer per acre, add 9 ml. or 2 tsp. SUTAN+ 7-E to each jar for compatibility testing purposes).
- ** Two (2) milliliters or one-half (1/2) teaspoon of adjuvant should be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizers.

Rate Table* for 1/4 cup of SUTAN+ 7-E/ATRAZINE
premix** and Adjuvant*** with Fluid Fertilizer

Gallons of Fluid Fertilizer to be applied per acre	10	15	20	25	30	40
tsp. of SUTAN+ 7-E premix with ATRAZINE	6-1/4	4	3	2-1/2	2	1-1/2
tsp. of ATRAZINE 80-WP for premix with SUTAN+ 7-E	7-3/4	5-1/4	4	3-1/4	2-3/4	2
tsp. of ATRAZINE 4-L for premix with SUTAN+ 7-E	4	2-3/4	2	1-3/4	1-1/4	1

*Based on field rate of 4 pounds actual SUTAN and 1.6 pounds actual ATRAZINE (80-W) or 1.5 pounds actual ATRAZINE (4-L) per acre in the fertilizer volumes indicated.

**Prepare two 1/4-cup SUTAN+ 7-E/ATRAZINE premixes by first adding ATRAZINE to water to make a smooth slurry; then add the SUTAN+ 7-E and stir thoroughly. Add one premix to each of the jars.

***Two (2) milliliters or one-half (1/2) teaspoon of adjuvant should be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizer.

Rate Table* for 1/4 cup of SUTAN+ 7-E/BLADEX premix**
add Adjuvant*** with Fluid Fertilizer

Gallons of Fluid Fertilizer to be applied per acre	10	15	20	25	30	40
tsp. of SUTAN+ 7-E for premix with BLADEX	6-1/4	4	3	2-1/2	2	1-1/2
tsp. of BLADEX 80-WP for premix with SUTAN+ 7-E	8-3/4	5-3/4	4-1/2	3-1/2	3	2-1/4
tsp. of BLADEX 4-L for premix with SUTAN+ 7-E	5-1/2	3-1/2	2-3/4	2-1/2	2	1-1/2

Procedure For Testing The Compatibility of SUTAN+ 7-E
With Fluid Fertilizer - Continued

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- *Based on field rate of 4 pounds actual SUTAN and 2 pounds actual BLADEX (80-W or 4-L) per acre in the fertilizer volumes indicated.
- **Prepare two 1/4-cup SUTAN+ 7-E/BLADEX premixes by first adding BLADEX to water to make a smooth slurry; then add the SUTAN+ 7-E and stir thoroughly. Add one premix to each of the jars.
- ***Two (2) milliliters or one-half (1/2) teaspoon of adjuvant should be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizer.

APPENDIX III

Tank Mix Directions

- 1) Fill the spray tank at least 2/3 full of appropriate carrier. Be sure tank is clean and not contaminated with 2,4-D, oil residue or other materials.
- 2) Start agitation and continue moderate agitation throughout mixing.
- 3) Premix the BLADEX or ATRAZINE making sure it is thoroughly wetted and dispersed in the tank prior to adding SUTAN+ 7-E.
- 4) Add the SUTAN+ 7-E to the tank 2/3 full of carrier already mixed with BLADEX or ATRAZINE.
- 5) Complete filling the remaining portion of the tank with carrier; mix thoroughly, maintain moderate agitation to provide a uniform mix during application.
- 6) The tank mix combination should not be left in the spray tank for prolonged periods; batches should be mixed and applied the same day.

Do not use excessive agitation as it may cause the BLADEX or ATRAZINE to settle out and set up in the spray tank. All return lines to the tank must discharge below liquid level.

APPENDIX IV

SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE (80W or 4L) OR SUTAN+ 7-E/
BLADEX (80W or 4L) IMPREGNATION ON DRY BULK FERTILIZERS

SUTAN+ 7-E alone and in combination with ATRAZINE or BLADEX may be impregnated on many dry bulk fertilizers (1) (2) and applied and incorporated into the soil before planting for the control of certain grassy weeds by SUTAN+ 7-E and many grassy and broadleaf weeds by the SUTAN+ 7-E/ATRAZINE or SUTAN+ 7-E/BLADEX combination in corn.

All SUTAN+ 7-E, ATRAZINE (80W or 4L) and BLADEX (80W or 4L) label and supplementary literature instructions and precautions regarding rates per acre, soil type and soil incorporation, application and other directions must be followed.

Test results have shown that SUTAN+ 7-E, SUTAN+ 7-E plus ATRAZINE (80W or 4L) and SUTAN+ 7-E plus BLADEX (80W or 4L) on many dry bulk fertilizers give weed control equal to SUTAN+ 7-E or a tank mix of SUTAN + 7-E plus ATRAZINE (80W or 4L) or SUTAN+ 7-E plus BLADEX (80W or 4L) applied as a spray in water or liquid fertilizer. However, uniform impregnation of the pesticides on the dry fertilizer particles and uniform application in the field are necessary to assure good results.

A minimum of 200 pounds and a maximum of 450 pounds of approved fertilizer ingredients (1) (2) impregnated with the appropriate amount of SUTAN+ 7-E alone or in combination with ATRAZINE (80W or 4L) or BLADEX (80W or 4L) must be applied per acre.

For impregnating the pesticides on dry fertilizers, use a closed rotary-drum type mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside of the mixer to provide uniform spray coverage of the tumbling fertilizer. The SUTAN+ 7-E should be sprayed uniformly onto the fertilizer using a fine spray pattern. For the SUTAN+ 7-E/ATRAZINE or SUTAN+ 7-E/BLADEX combination product, the ATRAZINE (80W or 4L) or BLADEX (80W or 4L) can be added and mixed uniformly with the fertilizer prior to the SUTAN+ 7-E addition, or alternatively, the SUTAN+ 7-E and ATRAZINE (80-W or 4L) or BLADEX (80W or 4L) can be mixed in the proper use ratio to prepare a uniform slurry for joint spray impregnation.

The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with SUTAN+ 7-E provides a satisfactory dry mixture.

If the absorptivity is not adequate, use of a highly absorptive powder is required to provide a dry, free-flowing mixture.

SUTAN+ 7-E/IMPREGNATION ON DRY BULK FERTILIZERS (CON'T) 32.

Microcel E (Johns-Manville Products Corporation) is the recommended absorbent powder. It should be added separately and uniformly to the prepared pesticide-fertilizer mixture, in a quantity that is sufficient to provide a suitably free-flowing mixture. Generally, less than 2% by weight of Microcel E is required.

The amount of SUTAN+ 7-E and ATRAZINE (80-W or 4-L) or BLADEX (80-W or 4-L) actually required in the manufacture of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amounts of SUTAN+ 7-E, ATRAZINE and BLADEX actually contained in the mixture applied to the soil represent the correct rates of use.

All individual state regulations relating to dry bulk fertilizer blending registration, labeling and application are the responsibility of the individual and/or company selling the SUTAN+ 7-E, SUTAN+ 7-E/ATRAZINE, or SUTAN+ 7-E/BLADEX fertilizer mixtures.

Nitrate fertilizers represent a potential explosive hazard, particularly in contact with organic substances such as SUTAN+ 7-E. Do not impregnate SUTAN+ 7-E or SUTAN+ 7-E/ATRAZINE (80W or 4L) or SUTAN+ 7-E/BLADEX (80W or 4L) on ammonium nitrate. Do not use fertilizers containing ammonium, potassium, or sodium nitrate.

Do not combine SUTAN+ 7-E plus ATRAZINE (80W or 4L) or BLADEX (80W or 4L) with single super-phosphate (0-20-0) or treble superphosphate (0-46-0).

Bulk fertilizers impregnated with SUTAN+ 7-E or SUTAN+ 7-E plus ATRAZINE (80W or 4L) or BLADEX (80W or 4L) should be applied immediately, NOT STORED. All bulk containers should be tightly covered while the products are being transported and applied to reduce chances of SUTAN+ 7-E loss via volatilization.

(1) APPROVED DRY FERTILIZER INGREDIENTS FOR USE WITH SUTAN+ 7-E

	<u>N</u>	<u>P</u>	<u>K</u>
Ammonium Sulfate	21	0	0
Ammonium Phosphate-Sulfate	16	20	0
Diammonium Phosphate	18	46	0
Potassium Chloride	0	0	60
Potassium Sulfate	0	0	52
Single Superphosphate	0	20	0
Treble Superphosphate	0	46	0
Urea*	45	0	0

*Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

NOTE: Sul-Po-Mag, K-Mag and 11-48-0 have been shown to be compatible with SUTAN+ 7-E and are approved for use.

SUTAN+ 7-E Physical Data

Specific Gravity 20/20°C: 0.952
 Pounds/Gallon, 20/20°C: 7.92
 Flashpoint: 197°F (Tagliabue closed cup)
 Viscosity: Sprayable down to minus 20°F.

(2) APPROVED DRY FERTILIZER INGREDIENTS FOR USE WITH SUTAN+ 7-E PLUS ATRAZINE (80W or 4L) OR BLADEX (80W or 4L)

	N	P	K
Ammonium Sulfate	21	0	0
Ammonium Phosphate-Sulfate	16	20	0
Diammonium Phosphate	18	46	0
Potassium Chloride	0	0	60
Potassium Sulfate	0	0	52
Urea*	45	0	0

*Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

NOTE: Sul-Po-Mag, K-Mag and 11-48-0 have been shown to be compatible with SUTAN+ 7-E plus ATRAZINE 80W or SUTAN+ 7-E plus BLADEX 80W and are approved for use.

(3) RATE CHART FOR THE IMPREGNATION OF DRY BULK FERTILIZERS WITH SUTAN+ 7-E OR SUTAN+ 7-E PLUS ATRAZINE (80W or 4L)

FERTILIZER RATE per acre	SUTAN + 7E Rate/Acre			ATRAZINE 80-WP Rate/Acre	
	3-1/2 pts. per acre	4-1/2 pts. per acre	7 pts. per acre	1-1/4 lbs. per acre	2 lbs. per acre
200 lbs.	17-1/4 qts./ton	23 qts./ton	34-1/3 qts./ton	12-1/2 lbs./ton	20 lbs./ton
250 lbs.	13-3/4 qts./ton	13-1/3 qts./ton	27-1/2 qts./ton	10 lbs./ton	16 lbs./ton
300 lbs.	11-1/2 qts./ton	15-1/4 qts./ton	23 qts./ton	8-1/3 lbs./ton	13-1/3 lbs./ton
350 lbs.	9-4/5 qts./ton	13 qts./ton	19-2/3 qts./ton	7-1/8 lbs./ton	11-2/5 lbs./ton
400 lbs.	8-2/3 qts./ton	11-1/2 qts./ton	17-1/4 qts./ton	6-1/4 lbs./ton	10 lbs./ton
450 lbs.	7-2/3 qts./ton	10-1/4 qts./ton	15-1/4 qts./ton	5-1/2 lbs./ton	8-7/8 lbs./ton

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SUTAN+ 7-E/IMPREGNATION ON DRY BULK FERTILIZERS (CON't) 34.

ATRAZINE 4L RATE/ACRE

FERTILIZER RATE per acre	1 QUART per acre	1-1/2 QUARTS per acre
200 lbs.	10 qts./ton	15 qts./ton
250 lbs.	8 qts./ton	12 qts./ton
300 lbs.	6-3/5 qts./ton	10 qts./ton
350 lbs.	5-4/5 qts./ton	8-3/5 qts./ton
400 lbs.	5 qts./ton	7-1/2 qts./ton
450 lbs.	4-2/5 qts./ton	6-3/5 qts./ton

RATE CHART FOR THE IMPREGNATION OF DRY BULK FERTILIZERS WITH
SUTAN+ 7-E or SUTAN+ 7-E PLUS BLADEX(80W or 4L)

Fertilizer Rate per Acre	SUTAN+ 7-E Rate/Acre			BLADEX 80W Rate/Acre		BLADEX 4L Rate/Acre	
	3-1/2pts. per acre	4-1/2pts. per acre	7 pts. per acre	2 lbs. per acre	2-1/2 lbs per acre	3pts. per acre	2qts. per acre
200 lbs.	17-1/4 qts/ton	23 qts/ton	34-1/3 qts/ton	20 lbs/ton	25 lbs/ton	15 qts/ton	20 qts/ton
250 lbs.	13-3/4 qts/ton	18-1/3 qts/ton	27-1/2 qts/ton	16 lbs/ton	20 lbs/ton	12 qts/ton	16 qts/ton
300 lbs.	11-1/2 qts/ton	15-1/4 qts/ton	23 qts/ton	13-1/3 lbs/ton	16 2/3 lbs/ton	10 qts/ton	13-1/3 qts/ton
350 lbs.	9-4/5 qts/ton	13 qts/ton	19-2/3 qts/ton	11-2/5 lbs/ton	14-1/4 lbs/ton	8-3/5 qts/ton	11-2/5 qts/ton
400 lbs.	8-2/3 qts/ton	11-1/2 qts/ton	17-1/4 qts/ton	10 lbs/ton	12-1/2 lbs/ton	7-1/2 qts/ton	10 qts/ton
450 lbs.	7-2/3 qts/ton	10-1/4 qts/ton	15-1/4 qts/ton	8-7/8 lbs/ton	11-1/8 lbs/ton	6-3/5 qts/ton	8-7/8 qts/ton