



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Barbara Brown
DREXEL CHEMICAL CO.
P. O. Box 9306
Memphis, TN 38109

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 07/28/93 in Response to PR Notice 93-7
EPA Reg. No. 19713-255
DREXEL VERNAM 7-E

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

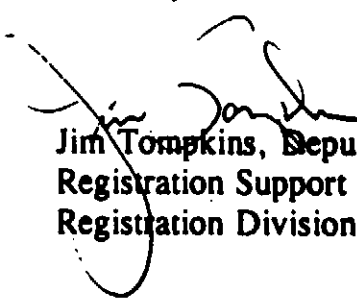
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division

Barbara Brown
DREXEL CHEMICAL CO
BOX 9306
MEMPHIS TN 38109

Comment for: EPA Reg Nr.19713-255
DREXEL VERNAM 7-E

The following specific comments pertain to your WPS
labeling submission concerning the product
cited above:

Delete the crossed-out statements on your proposed label. They
are redundant statements or phrases.

Add to the Start of Section for PPE: Some materials that are
chemical resistant to this product are listed below. If you want
more options, follow instruction for category " " on an EPA
chemical resistant category selection chart.

DREXEL
VERNAM 7-E

Selective Herbicide

Liquid Herbicide for
Weed Control in Soybeans
and Peanuts

ACTIVE INGREDIENT:

S-Propyl dipropylthiocarbamate..... 88.5%

INERT INGREDIENTS:..... 11.5%

TOTAL:..... 100.0%

Contains Seven Pounds of Active Ingredient Per Gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 19713-255
Net Contents 2 1/2 Gal./9.45 L.

EPA Est. No. 19713-GA-1

Revisions 6/93

ACCEPTED
with COMMENTS
in EPA Letter Dated
MAR 11 1994

Manufactured By:
Drexel Chemical Company
P.O. Box 9306, Memphis, Tenn. 38109-0306

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
19 713 -255

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: DO NOT induce vomiting. Immediately give large quantities of water. If vomiting does occur, give fluids again. Never give anything by mouth to an unconscious person. Call a physician or the nearest Poison Control Center immediately.

FOR EYE CONTACT: Hold eyelids apart and flush with large amounts of running water for at least 15 minutes. Call a physician.

FOR SKIN CONTACT: Flush with large amounts of running water for 15 minutes. ~~Remove contaminated clothing and shoes. Get medical attention if skin irritation occurs. Wash clothing before reuse.~~

IF INHALED: Remove to fresh air. Get medical attention if respiratory irritation occurs.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.

BEST AVAILABLE COPY

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

[REDACTED]

[REDACTED]

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ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes.

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: Country: United States of America

WEEDS CONTROLLED BY VERNAM 7-E

VERNAM 7-E will not control established weeds:

Annual Grasses:

Barnyardgrass (Watergrass)	(Echinochloa crus-galli)
Bermudagrass seedlings**	(Cynodon dactylon)
Crabgrass	(Digitaria spp.)
Fall Panicum	(Panicum dichotomiflorum)
Foxtail millet	(Setaria italica)
Giant foxtail	(Setaria faberi)
Goosegrass	(Eleusine indica)
Green foxtail	(Setaria viridis)
Johnsongrass, seedling	(Sorghum halepense)
Wild cane*	(Sorghum bicolor)
Yellow foxtail	(Setaria glauca)

*Cultivation is suggested in addition to the VERNAM 7-E treatment in fields with moderate or heavy infestations of wild cane.

**Southeastern U.S. only

Annual Broadleaf Weeds:

Annual morningglory	(Ipomoea purpurea)
Balloonvine*	(Cardiospermum halicacabum)
Carpetweed	(Mollugo verticillata)
Common lambsquarter	(Chenopodium album)
Florida purslane (Florida pursley)	(Richardia scabra)
Purslane	(Portulaca oleracea)
Redroot pigweed	(Amaranthus retroflexus)
Sicklepod (coffeeweed)	(Cassia obtusifolia)
Smooth pigweed	(Amaranthus hybridus)
Velvetleaf (buttonweed)	(Abutilon theophrasti)

*In Alabama Only

The above listed broadleaf weeds will be controlled only if treatment is made when conditions are favorable for weed seed germination and growth.

Perennial Grasses:

Bermudagrass*	(Cynodon dactylon)
Purple nutsedge (nutgrass)	(Cyperus rotundus)
Yellow nutsedge (nutgrass)	(Cyperus esculentus)

*Southeastern U.S. only

Existing stands of nutgrass must be turned under and chopped up thoroughly before treatment. For nutgrass control VERNAM 7-E must be thoroughly mixed into the soil prior to planting or applied subsurface to the soil with injectors or sweeps. Cultivation is suggested in addition to VERNAM 7-E treatment in fields with moderate to heavy nutgrass infestations.

GENERAL USE PRECAUTIONS

Read entire label before using.

VERNAM 7-E should be used only for recommended purposes and at recommended rates (do not overdose).

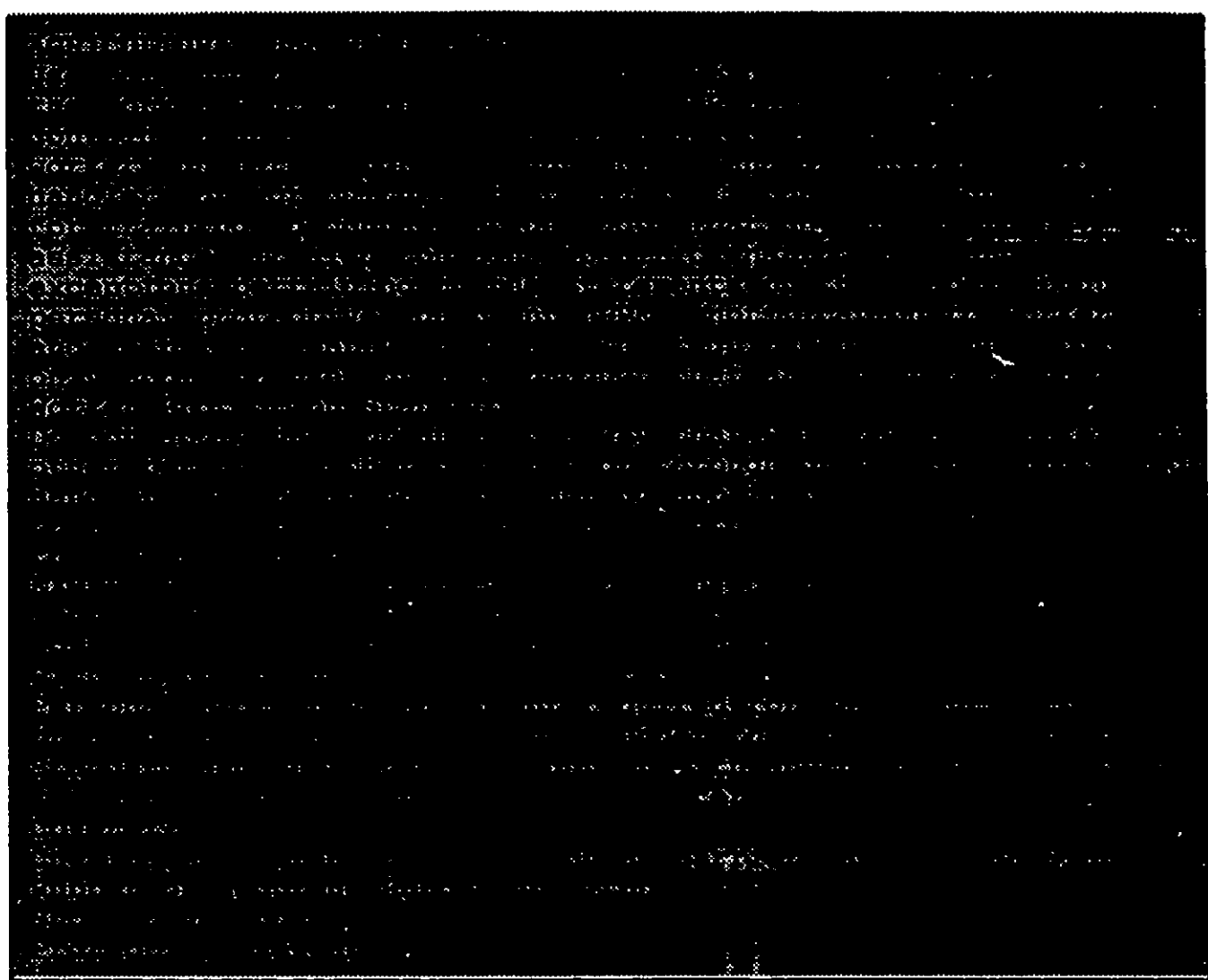
Failure to follow label instructions, or use on crops not specifically listed on the label may result in crop injury or destruction.

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

Malformation of the primary leaves is not unusual. This condition is only temporary and will not affect yields. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, the use of certain soil-applied systemic insecticides, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. VERNAM 7-E used under these abnormal conditions could result in crop injury.

VERNAM 7-E is recommended for use on mineral soils only. Do not tank mix VERNAM 7-E with insecticides or fungicides. Do not contaminate irrigation water or water used for domestic purposes. In irrigated areas, do not apply VERNAM 7-E before pre-irrigation.

DIRECTIONS FOR USE OF VERNAM 7-E
IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER
INCONSISTENT WITH ITS LABELING.



BEST AVAILABLE COPY

VERNAM 7-E is a selective herbicide which is mixed (incorporated) into the soil or applied below the surface of the soil for control of weeds listed on this label. VERNAM 7-E controls annual weeds 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.

APPLICATION DIRECTIONS

Pour the recommended amount of VERNAM 7-E into the spray tank during the filling operation. Apply in 10 to 50 gallons of water per acre using a properly calibrated, low-pressure (20 to 40 PSI) sprayer having good agitation. The soil should be well-worked and dry enough to permit good soil mixing (incorporation) or subsurface application. Soil should be as free as possible of trash for subsurface application with sweeps or injectors. Avoid overlaps that will increase dosage above recommended limits.

FLUID FERTILIZER STATEMENT

VERNAM 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.

DRY FERTILIZER STATEMENT

VERNAM 7-E may be impregnated on many dry bulk fertilizers for use on registered crops. However, uniform distribution of VERNAM 7-E on fertilizer particles and uniform application are necessary to assure good results. See Appendix II for information and directions for impregnation and use.

INCORPORATION DIRECTIONS

VERNAM 7-E must be incorporated into the soil immediately (within minutes) to prevent loss of the herbicide. Whenever possible, application and incorporation should be done in the same operation.

SOIL MIXING (INCORPORATION) BEFORE PLANTING: The following equipment is commonly used for soil mixing (incorporation) before planting:

Power Driven Cultivation Equipment (Recommended on all soil types previously primary tilled): Ground speed should be adjusted with all PTO driven cultivation tools to ensure thorough soil mixing.

- a. Horizontal action: set to cut 4 to 6 inches deep.
- b. Vertical action: set to cut 3 to 4 inches deep.

Tandem Discs: Set to cut to a depth of 4 to 6 inches, operated at 4 to 6 mph, followed by a spike-tooth harrow or some other leveling device which extends beyond the ends of the discs. For more thorough mixing (for control or suppression of deep-germinating grasses - wild cane, seedling johnsongrass, and nutsedge, disc in two different directions (cross disc). Prior to the second discing, raise the disc to prevent cutting deeper than 4 to 6 inches.

NOTE: In the Southern Delta of the Mississippi Valley, disc incorporation is not recommended on the heavy (gumbo) clay soils.

Field Cultivators (Recommended for use on coarse textured 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 spike-tooth harrow pulled behind the cultivator. Do not use chisel plows for incorporation. 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 or suppression of deep-germinating weeds such as nutgrass, johnsongrass seedlings or wild cane is desired. For control of these weeds, use a disc for at least one of the passes over the field.

SOIL MIXING (INCORPORATION) AFTER PLANTING: Use power-driven cultivation equipment set to cut to a depth of 2 inches, or on coarse textured (light) soils only, ground-driven tillers (rolling cultivators, rotary hoe, row wheels, etc.) set to cut to a depth of 1- $\frac{1}{4}$ inches and operated at 6 to 8 mph. When incorporating after planting, care must be taken not to disturb the crop seed or seedlings by adjusting tines or blades of incorporation equipment so they are not directly over the drill row.

SUBSURFACE APPLICATION BEFORE OR AT PLANTING (for peanuts and soybeans only): Special equipment designed for subsurface application **MUST** be used. Injector units must be rigidly mounted on or **IMMEDIATELY** ahead or **IMMEDIATELY** behind the planter unit. Sweeps must be mounted **IMMEDIATELY** ahead of the planter unit.

- (1) **Soil Injection** -- Injector shanks must be spaced 2 $\frac{1}{4}$ to 3 inches apart and mounted in staggered positions to avoid trash buildup. Set shanks to inject VERNAM 7-E 1 $\frac{1}{4}$ to 3 inches below the soil surface. The width of the band in which weed control is desired will determine the number and spacing of injector shanks required per row. (Example: Four injector shanks spaced 3 inches apart gives a 12-inch band). A broadcast application can be made by increasing the number of shanks. The two shanks adjacent to the drill row must be 1 $\frac{1}{4}$ to 1 $\frac{1}{2}$ inches on either side of it.
- (2) **Covered Sweeps** -- Set the sweeps to run 3 to 4 inches below the soil surface. Calibrate by measuring the spray band width at the back edge of the sweep, not the sweep width. For **BROADCAST APPLICATIONS**, stagger sweeps on double tool bar so that they overlap sufficiently to allow spray bands to meet. **NOTE:** When apply with sweeps, VERNAM 7-E must be applied deep enough to allow 3 to 4 inches of soil to remain over the treatment after the planting operation.

PLANTING -- SOYBEANS, PEANUTS

Do not plant seed deeper than 2 inches. FOR VERNAM 7-E application made before planting, seeding can be done immediately, or it may be delayed up to 10 days. 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 herbicide was incorporated. To avoid removing VERNAM 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.

RECOMMENDATIONS -- VERNAM 7-E

These recommendations are given in terms of broadcast (overall) rates of VERNAM 7-E per acre. For band or row application, reduce broadcast rates proportionately, depending upon band width to be treated and row spacing.

PEANUTS

VERNAM 7-E may be applied before planting, at planting or immediately after planting. When applying after planting, care must be taken not to disturb the seed. Use 2¹-3 pints on coarse textured (sandy-light) soils; 3 pints on medium to fine textured (sandy loam to clay loam-medium to heavy) soils.

USE PRECAUTIONS FOR IRRIGATION SYSTEMS:

1. Apply this product only through sprinkler including center pivot systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

USE PRECAUTIONS FOR SPRINKLER IRRIGATION:

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.
8. Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.
9. Do not apply when wind speed favors drift beyond the area intended for treatment, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled and drained.

SOYBEANS

The following recommendations are for soybeans grown in all areas except in the Southeastern States:

VERNAM 7-E may be applied before planting, at planting, or immediately after planting. When applying at or after planting, care must be taken not to disturb the crop seed or seedlings. Use 2¹-3 pints on coarse textured (sandy-light) soils, 3 pints on medium to fine textured (sandy loam to clay loam - medium to heavy) soils, 3½ pints on very fine textured (clay - very heavy) soils.

For soybeans grown in the Southeastern States including North Carolina, South Carolina, Georgia, Alabama, Florida and Eastern Tennessee (Tenn. River East):

VERNAM 7-E may be applied before planting, at planting, or immediately after planting. For incorporated applications made before planting, do not plant in deep furrows, or use shanks or other device ahead of planter which bring up untreated soil to the surface. For furrow planted soybeans, apply VERNAM 7-E at or immediately after planting in bands over the row and incorporate with row wheels only. When applying at or after planting, care must be taken not to disturb the crop seed or seedlings. Use 2¹-3 pints on coarse textured (sandy-light) soils; 3 pints on medium to fine textured (sandy loam to clay loam-medium to heavy) soils.

NOTE: In areas where beds are made prior to planting soybeans, VERNAM 7-E may be applied in a band immediately ahead of the bedding discs, set to cover the VERNAM 7-E with 3 to 4 inches of soil. If bed levelers are used before planting soybeans, make the beds higher to compensate for leveling, so 2 to 3 inches of soil remain over the treatment after the planting operation is done.

SEQUENTIAL APPLICATIONS

IMPORTANT: Always consult exact label of each herbicide used for specific recommendations and limitations.

For control of weeds not listed on the VERNAM 7-E label, and for increased control of labeled broadleaf weeds, the following herbicides are suggested as overlay treatments after preplant applications of VERNAM 7-E:

SOYBEANS

AMIBEN* 2 lbs./gal. liquid

Broadcast rates per acre:

Coarse textured (light) soils -- 1 Gallon
 Medium textured (medium) soils -- 1¹/₈ Gallons
 Fine textured (heavy) soils -- 1¹/₂ Gallons
 BASAGRAN* 4 lbs./gal. liquid

Broadcast rates per acre:

Apply to 1 quart per acre. Rates depend upon weeds to be controlled. Consult and follow the recommended rates on the BASAGRAN label.

LOROX* 50W**Broadcast rates per acre:**

Use 1 to 2-¹/₄ lbs. LOROX 50W per acre depending on soil type. Use on coarse to medium textured soils. Apply after planting before soybeans emerge. Plant soybeans at least 1_ inches deep on flat seed bed only to avoid possible crop injury. Do not use on sand or loamy sand or soil with less than 1% organic matter since crop injury may result.

*AMIBEN-Reg. TM Union Carbide Agricultural Products Co., Inc.

*BASAGRAN-Reg. TM BASF Aktiegesellschaft

*LOROX-Reg. TM E.I. Du Pont de Nemours & Co., Inc.

TANK MIX DIRECTIONS FOR USE ON PEANUTS

VERNAM 7-E may be combined with the compounds listed in this section for tank mix application on peanuts. Recommended rates for each tank mix are listed below. Mixing, spray equipment, soil incorporation, and planting directions for VERNAM 7-E tank mixes on peanuts are listed at the end of the peanut tank mix section.

VERNAM 7-E/BALAN *1.5 EC FOR PEANUTS

A tank mix combination of VERNAM 7-E and BALAN E.C. can be used prior to planting for weed control in peanuts.

NOTE: Follow all use precautions and warnings that appear on the BALAN 1.5 EC label and on the VERNAM 7-E label. Do not contaminate water by cleaning of equipment or disposal of wastes.

*BALAN is a registered trademark of Elanco Products Company

WEEDS CONTROLLED**Annual Grasses:**

Annual bluegrass
 Barnyardgrass (watergrass)
 Crabgrass
 Crowfootgrass
 Fall panicum
 Field sandbur
 Foxtails
 Goosegrass
 Junglerice
 Ryegrass
 Johnsongrass, seedling
 Texas panicum
 (buffalograss)
 (coloradograss)

Perennial Grasses:

Nutsedge (nutgrass)

Annual Broadleaves:

Balloonvine*
 Carpetweed
 Chickweed
 Common lambsquarters
 Florida purslane
 (pursley)
 Knotweed
 Palmer amaranth
 (carelessweed)
 Pigweed
 Purslane
 Redmaids

*In Alabama Only

APPLICATION DIRECTIONS

The following directions give broadcast rates of VERNAM 7-E and BALAN 1.5 EC for application prior to planting. Do not apply this combination after planting. BALAN 1.5 EC is not recommended for use on muck or other soil high in organic matter content.

Broadcast Rates Per Acre (Conventional spray and center pivot sprinklers):

Apply 2-1/3 pints VERNAM 7-E plus 3 quarts BALAN 1.5-EC on coarse and medium textured (sandy and loam -- light and medium) soils. Apply 3 pints VERNAM 7-E plus 4 quarts BALAN 1.5 EC on fine textured (silt and clay -- heavy) soils.

CENTER PIVOT SPRINKLER APPLICATION:

(Limit use to the Southeastern U.S. only.)
Apply VERNAM 7-E/BALAN 1.5-EC with irrigation water before planting or immediately after planting before either peanuts 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 herbicides. Meter the premixed VERNAM 7-E/BALAN 1.5-EC into the irrigation water during the entire period. Apply in 1/4 inch of water.

VERNAM 7-E/TREFLAN* 4-EC FOR PEANUTS

Selective Herbicide -- Tank Mix Directions

For TEXAS and OKLAHOMA ONLY

A tank mix combination of VERNAM 7-E and TREFLAN 4-EC can be used prior to planting for weed control in peanuts. The combination will control a broader spectrum of weeds than either material used alone. It is especially useful where nutgrass and Texas Panicum are a problem.

WEEDS CONTROLLED**Annual Grasses:**

Annual Bluegrass
Barnyardgrass
(watergrass)
Brachiaria
Bromegrass
Cheat
Crabgrass
Fall panicum
Foxtails
(including giant foxtail)
Goosegrass
Junglerice
Johnsongrass, seedling
Sandbur
Sprangletop
Stinkgrass
Texas Panicum
(buffalograss)

Annual Broadleaves:

Balloonvine**
Carpetweed
Carelessweed
Chickweed
Florida purslane
(pursley)
Goosefoot
Knotweed
Kochia
Lambsquarters
Pigweeds
(spiny, redroot)
Puncturevine
Purslane
Russian thistle
Stinging nettle
Perennial Grasses:
(coloradograss)

Perennial Grasses:

Nutsedge
(nutgrass)

****In Alabama Only**

APPLICATION DIRECTIONS

The following directions give broadcast rates for VERNAM 7-E and TREFLAN 4-EC as a spray tank mix for application prior to planting. Read and follow all directions, use limitations, precautions and warnings that appear on the TREFLAN 4-EC and VERNAM 7-E labels.

Broadcast rates per Acre:

Apply and incorporate before planting 2¹-3 pints of VERNAM 7-E and 1 pint TREFLAN 4-EC per acre. For band applications, reduce dosage proportionately, depending on row space and band width to be treated.

Use the following directions for the VERNAM 7-E tank mixes on peanuts.

MIXING:

Add the recommended rates of the herbicides to the spray tank during filling and mix thoroughly. Begin adding the herbicides when spray tank is half full. Apply in 10 to 50 gallons of water per acre.

SPRAY EQUIPMENT:

Use a properly calibrated, low pressure, boom-type sprayer having good agitation. Check frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern.

SOIL INCORPORATION:

The tank mix combinations must be mixed (incorporated) into the soil immediately after application. Whenever possible, application and incorporation should be done in the same operation. This can be done by mounting the tanks and boom right on the incorporation rig.

For thorough incorporation, use the following equipment:

TANDEM DISC: Set to cut 3 to 6 inches operated at 4-6 mph, followed by a spike-tooth harrow or some other leveling device, which extends beyond the ends of the disc. For thorough mixing, disc in two different directions (cross-disc) or;

POWER DRIVEN: cultivation equipment (tillers, cultivators, hoes) set to cut 2 to 3 inches deep.

Shallow incorporation of less than 2 inches may result in erratic weed control.

PLANTING:

Peanuts should be planted within 48 hours after the combination has been applied to obtain the maximum period of weed control during the growing season.

TANK MIX DIRECTIONS FOR USE ON SOYBEANS

VERNAM 7-E may be combined with the compounds listed in this section for tank mix applications on soybeans. Recommended rates for each tank mix are listed in the sections below. The mixing, spray equipment, soil incorporation, and planting directions for the VERNAM 7-E tank mixes on soybeans are listed at the end of the soybean tank mix section.

VERNAM 7-E/TREFLAN 4-EC TANK MIX**DIRECTIONS FOR SOYBEANS**

A tank mix combination of VERNAM 7-E (7 pounds active ingredient per gallon) and TREFLAN EC (4 pounds of active ingredient per gallon) can be used prior to planting for weed control in soybeans.

The combination will control a broader spectrum of weeds than either material used alone. This includes tough weeds such as nutgrass, velvetleaf, foxtails, johnsongrass, redroot pigweed and wild cane.

Dependable performance -- because the herbicides are mixed into the soil, rainfall is not needed to move them into the weed germinating zone. They are already there to kill grass and broadleaf weeds when they sprout.

WEEDS CONTROLLED:**Annual Grasses:**

Annual bluegrass
Barnyardgrass
(watergrass)
Brachiaria
Bromegrass
Cheat
Crabgrass
Fall Panicum
Field sandbur
Foxtails
Goosegrass
Junglerice
Johnsongrass, seedling
Sprangletop
Stinkgrass
Texas panicum
(buffalograss)
(coloradograss)
Wild cane

Annual Broadleaves:

Annual morningglory
Balloonvine**
Carpetweed
Chickweed
Common lambsquarters
Florida pursley
Goosefoot
Knotweed
Kochia
Palmer amaranth
(carelessweed)
Pigweed
Purslane
Russian thistle
Sicklepod
(coffeeweed)
Stinging nettle
Velvetleaf
(buttonweed)

Perennial Grasses:

Purple Nutsedge (nutgrass)
Yellow Nutsedge (nutgrass)
Rhizome johnsongrass*

*Suppression

**In Alabama Only

APPLICATION DIRECTIONS

Read and follow all directions, use limitations, precautions and warnings that appear on the VERNAM 7-E and TREFLAN 4-EC labels. Do not contaminate water by cleaning of equipment or disposal of wastes.

Application Rates

Soil Texture	Broadcast Rates/Acre	
	VERNAM 7-E*	TREFLAN 4-EC*
Coarse (light-sandy soils)	2 ¹ -3 pints	1 pint
Medium (silt loam and sandy clay soils)	2 ¹ -3 to 3** pints	1 to 1½ pints
Fine (heavy-clay soils)	3 to 3½ pints	1 to 2 pints

*For rhizome johnsongrass suppression, use the high rates of TREFLAN 4-EC and VERNAM 7-E.

**For nutgrass, wild cane and velvetleaf control, use the high rate of 3 pints VERNAM 7-E on medium-textured soils.

For Rhizome Johnsongrass -- Use mold board plow, chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc set to cut 4-6 inches deep and operate in two different directions at 4-6 mph before application to cut the rhizomes into small (2-3 inch) pieces. This should also destroy any emerged johnsongrass.

Cultivation is suggested in addition to VERNAM 7-E/TREFLAN 4-EC treatment in fields with moderate to heavy infestations of nutgrass, wild cane, velvetleaf, and johnsongrass rhizomes.

VERNAM 7-E/TREFLAN 4-E/METRIBUZIN**TANK MIX DIRECTIONS FOR USE ON SOYBEANS**

A tank mix of VERNAM 7-E (7 pounds active ingredient per gallon) and TREFLAN 4-EC (4 pounds active ingredient per gallon) and METRIBUZIN 4-L (4 pounds active ingredient per gallon) or METRIBUZIN 50-WP (50% active ingredient by weight) can be used prior to planting for weed control in soybeans.

The combination will control a broader spectrum of weeds than the VERNAM 7-E/TREFLAN 4-EC tank mix.

WEEDS CONTROLLED:

- | | |
|---------------------------|----------------------------|
| Annual Grasses: | Annual Broadleaves: |
| Annual bluegrass | Balloonvine** |
| Barnyardgrass | Carpetweed |
| (watergrass) | Chickweed |
| Brachiaria | Cocklebur |
| Bromegrass | Common lambsquarters |
| Cheat | Common ragweed |
| Crabgrass | Florida pursley |
| Fall Panicum | Goosefoot |
| Field sandbur | Knotweed |
| Foxtails | Kochia |
| Goosegrass | Palmer Amaranth |
| Junglerice | (carelessweed) |
| Johnsongrass, seedling | Pennsylvania smartweed |
| Sprangletop | Pigweed |
| Stinkgrass | Prickly sida |
| Texas panicum | Purslane |
| (buffalograss) | Russian thistle |
| (coloradograss) | Sicklepod (coffeeweed) |
| Wild cane | Stinging nettle |
| Perennial Grasses: | Velvetleaf (buttonweed) |
| Purple nutsedge | Venice mallow |
| (nutgrass) | |
| Yellow nutsedge | |
| (nutgrass) | |
| Rhizome johnsongrass* | |

*Suppression
 **In Alabama only

APPLICATION DIRECTIONS

Read and follow all directions, use limitations, precautions and warnings that appear on the VERNAM 7-E, TREFLAN 4-EC and appropriate METRIBUZIN (4-L or 50-WP) labels. Do not contaminate water by cleaning of equipment or disposal of wastes.

Application Rates

Soil Texture	Broadcast Rates/Acre		
	VERNAM 7-E*	TREFLAN 4-EC	METRIBUZIN 4L or 50-WP
Medium (silt loam and sandy clay soils)	2 ¹ / ₂ -3 to 3** pints	1 pint	¹ / ₂ pint or ¹ / ₂ pound
Fine (heavy-clay soils)	3 to 3 ¹ / ₂ pints	1 pint	¹ / ₂ -3/4 pint or ¹ / ₂ -3/4 pound

*For Rhizome johnsongrass suppression use the high rate of VERNAM 7-E.
 **For nutsedge, wild cane, and velvetleaf control, use the high rate of 3 pints of VERNAM 7-E on medium-textured soils.
 Do not use the VERNAM/TREFLAN/METRIBUZIN tank mix on coarse (light sandy) soils.

For Rhizome johnsongrass -- use mold board plow, chisel plow or similar implement to bring rhizomes to the top of the soil. Then follow with a disc set to cut 4-6 inches deep and operate to two different directions at 4-6 mph before application to cut the rhizomes into small (2-3 inch) pieces. This should also destroy any emerged johnsongrass.

Cultivation is suggested in addition to VERNAM 7-E/TREFLAN 4-EC/METRIBUZIN (4-L or 50-WP) treatment in fields with moderate to heavy infestations of nutgrass, wild cane, velvetleaf, and johnsongrass rhizomes.

*AMIBEN Reg. TM of Union Carbide Agricultural Products Co., Inc.

VERNAM 7-E/AMIBEN* TANK MIX

DIRECTIONS FOR SOYBEANS

A tank mix combination of VERNAM 7-E (7 pounds active ingredient per gallon) and AMIBEN (2 pounds active ingredient per gallon) can be used prior to planting, for weed control in soybeans. The combination will control a broader spectrum of weeds than either material used alone.

*AMIBEN TM Union Carbide Agricultural Products Co., Inc.

WEEDS CONTROLLED:

Annual Grasses:

Barnyardgrass
(watergrass)
Crabgrass
Foxtail
(giant, green, yellow)
German millet
Goosegrass
Johnsongrass, seedling

Perennial Grasses:

Purple nutsedge
(nutgrass)
Yellow nutsedge
(nutgrass)

Annual Broadleaves:

Annual morningglory
Annual spurge
Carpetweed
Chickweed
Coffeeweed
Common lambsquarters
Common ragweed
Florida pursley
Kochia
Mustard, wild
Nightshade, black
Pennsylvania smartweed
Pigweed
(redroot, smooth)
Prickly sida (teaweed)
Purslane
Sicklepod
Velvetleaf (buttonweed)

APPLICATION DIRECTIONS

Read and follow all directions, use limitations, precautions and warnings that appear on the VERNAM 7-E and AMIBEN labels. Do not contaminate water by cleaning of equipment or disposal of wastes.

Application Rates Broadcast Rates/Acre

Soil Texture	VERNAM 7-E	AMIBEN
Medium (silt loam & sandy clay soils)	2 ¹ / ₃ pints	3 quarts

For mixing, spray equipment, soil incorporation, and planting directions, refer to the directions at the end of the VERNAM 7-E tank mix on soybeans section of this label.

VERNAM 7-E/LASSO* 4-EC

TANK MIX DIRECTIONS FOR USE ON SOYBEANS

A tank mix combination of VERNAM 7-E (7 pounds active ingredient per gallon) and LASSO 4-EC (4 pounds active ingredient per gallon) can be used prior to planting for weed control in soybeans grown in North Central States of Michigan, Indiana, and Illinois. Do not use on sand or loamy sandy soils as injury may occur.

The combination will provide better weed control than either herbicide used alone.

WEEDS CONTROLLED:

Annual Grasses:

Barnyardgrass
(watergrass)
Crabgrass
Fall panicum
Foxtail
(giant, green, yellow)
Goosegrass
Johnsongrass, seedling
Perennial Grasses:
Purple nutsedge
(nutgrass)
Yellow nutsedge
(nutgrass)

Annual Broadleaves:

Annual morningglory
Carpetweed
Common lambsquarters
Florida pursley
Pennsylvania smartweed
Pigweed
(redroot, smooth)
Purslane
Sicklepod
Velvetleaf (buttonweed)

APPLICATION DIRECTIONS

Read and follow all directions, use limitations, precautions and warnings that appear on the VERNAM 7-E and LASSO 4-EC labels. Do not contaminate water by cleaning of equipment or disposal of wastes.

Soil Texture	Application Rates	
	Broadcast Rates/Acre	
	VERNAM 7-E	LASSO 4-EC
Coarse (light-sandy soils)	1- ³ / ₄ pints	2 pints
Medium (silt loam & sandy clay soils)	2- ¹ / ₃ pints	3 pints
Fine (heavy-clay soils)	3 pints	4 pints

*For nutgrass and velvetleaf control, use the rate of 3 pints of VERNAM 7-E tank mix on soybean section of this label.

*Lasso Reg. TM Monsanto Company

VERNAM 7-E/PROWL* TANK MIX DIRECTIONS FOR SOYBEANS

A tank mix combination of VERNAM 7-E (7 pounds active ingredient per gallon) and PROWL 4-E (4 pounds active ingredient per gallon) can be used prior to planting, for weed control in soybeans. The combination will provide better weed control than either herbicide use alone.

WEEDS CONTROLLED:**Annual Grasses:**

Barnyardgrass
(watergrass)
Crabgrass
Foxtail Millet
Foxtail
(giant, green, yellow)
Johnsongrass, seedling

Perennial Grasses:

Purple nutsedge
(nutgrass)
Yellow nutsedge
(nutgrass)

Annual Broadleaves:

Annual morningglory
Carpetweed
Common lambsquarters
Florida pursley
Pigweed
..(redroot, smooth)
Goosegrass
Purslane
Sicklepod
Velvetleaf (buttonweed)

APPLICATION DIRECTIONS

Read and follow all directions, use limitations, precautions and warnings that appear on the VERNAM 7-E and PROWL 4-E labels. Do not contaminate water by cleaning of equipment or disposal of wastes.

**Application Rates
Broadcast Rates/Acre**

Soil Texture	VERNAM 7-E	PROWL 4-E
Coarse (light-sandy soils)	1- ³ / ₄ pints	³ / ₄ pint
Medium (silt loam & sandy clay soils)	2- ¹ / ₃ pints	1 pints
Fine (heavy-clay soils)	3 pints	1- ¹ / ₂ pints

*For nutgrass and velvetleaf control, use the rate of 3 pints of VERNAM 7-E on medium textured (medium and heavy clay) soils. For mixing, spray equipment, soil incorporation, and planting directions, refer to the directions at the end of the VERNAM 7-E tank mix on soybean section of this label.

*Prowl Reg. TM American Cyanamid Company

USE THE FOLLOWING DIRECTIONS FOR THE VERNAM 7-E TANK MIXES ON SOYBEANS

MIXING:

Add the recommended rates of VERNAM 7-E and TREFLAN 4-EC to the spray tank during filling and mix thoroughly. Begin adding the herbicides when spray tank is half full. Apply in 10 to 50 gallons of water per acre.

SPRAY EQUIPMENT:

Use a properly calibrated, low pressure, boom-type sprayer having good agitation. Check frequently during application to be sure nozzles are free from clogging and are delivering a uniform spray pattern.

DRY FERTILIZER STATEMENT

VERNAM 7-E/TREFLAN 4-EC may be impregnated on many dry bulk fertilizers for use soybeans. However, uniform distribution of VERNAM 7-E/TREFLAN 4-EC on fertilizer particles and uniform application are necessary to assure good results. See Appendix II for information and directions for impregnation and use.

SOIL INCORPORATION:

The tank mix combinations must be mixed (incorporated) into the soil immediately after application. Whenever possible, application and incorporation should be done in the same operation. This can be done by mounting the tanks and boom right on the incorporation rig.

For thorough incorporation, use the following equipment:

TANDEM DISC: Set to cut to a depth of 4 inches, followed by a spike-tooth harrow or some other leveling device, which extends beyond the ends of the disc. For thorough mixing, disc in two different directions (cross-disc) or;

PLANTING:

Do not plant seed deeper than 2 inches. Seedling can be done immediately, or it may be delayed up to 10 days. 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 herbicide was incorporated i.e., no more than 1/2 the depth the herbicides were incorporated. To avoid removing the herbicide 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.

APPENDIX I**PROCEDURE FOR TESTING THE COMPATIBILITY OF VERNAM 7-E AND COMBINATIONS WITH FLUID FERTILIZERS**

The following procedure is suggested for determining whether VERNAM 7-E may be combined with a specific fluid fertilizer for spray tank application.

MATERIALS REQUIRED:

1. VERNAM 7-E and/or combination.
2. Fluid fertilizer to be used.
3. Adjuvant for fertilizer tank mix: Compex*, Sponto 168-D*, Unite*, or equivalent.

The adjuvant which provides the best COMPATIBILITY depends on the specific fertilizer under consideration.

- 4. Two one-quart, wide-mouth glass jars with lid.
- 5. Measuring spoons; a 25 ml pipette or graduated cylinder provides more accurate measurement; 1 tablespoon equals 3 teaspoons, 1 teaspoon equals approximately 5 milliliters.
- 6. Measuring cup, 8 oz. (237 ml.)

*Complex TM, Kalo Laboratories, Inc., Kansas City, Missouri; Sponto 168-D TM, Witco Chemical Company, Houston, Texas; Unite TM, Hopkins Agricultural Chemical Company, Madison, Wisconsin

PROCEDURE:

- 1. Pour a pint (about 473 ml) of the fluid fertilizer into each of the quart jars.
- 2. Add adjuvant to one of the jars and mix (see rate table).
- 3. Add the VERNAM 7-E to the desired combinations of herbicide to both jars (see rate table for vernam 7-E).
- 4. Close both jars with lid and mix the contents by turning the jars upside down ten times.
- 5. Inspect the surface and body of the mixtures --
 - (A) Immediately after completing the jar inversions.
 - (B) After allowing the jars to stand quietly for 30 minutes.
 - (C) And then again after turning the jars upside down 10 times.

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. Should either mixture separate after 30 minutes, but readily remix uniformly with the jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant first at a rate of 3 pints per 100 gallons of fluid fertilizer; foaming can be minimized by using moderate agitation.

If nondispersible oil, sludge, or clumps of solids form in the mixtures, the combinations should not be used.

RATE TABLE FOR VERNAM 7-E AND ADJUVANT
WITH THE FLUID FERTILIZER**

Gallons of Fluid Fertilizer To Be Applied Per Acre	mL. or Tsp. of VERNAM 7-E* To Be Added to 1 Pint of Fertilizer	
	VERNAM 7-E mL.	Tsp.
10	7	1-1/3
15	5	1
20	4	3/4
25	3	2/3
30	2	1/2
40	2	1/2

*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 VERNAM 7-E in 40 gallons fertilizer per acre, add 8 mL. or 2 tsp. VERNAM 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 fertilizer.

APPENDIX II

**VERNAM 7-E AND VERNAM/TREFLAN 4-EC
IMPREGNATION ON DRY BULK FERTILIZERS**

CAUTION: VERNAM 7-E alone or in combination with other herbicides must not be impregnated on ammonium nitrate, sodium nitrate or potassium nitrate. Such mixtures may cause explosion and fire. VERNAM 7-E alone may be impregnated on many* dry bulk fertilizer for use on registered crops. VERNAM 7-E in combination with TREFLAN may be impregnated on many* dry bulk fertilizers and applied and incorporated in the soil before planting for the control of labeled grasses and broadleaf weeds in soybeans. Field results have shown that VERNAM 7-E and VERNAM/TREFLAN 4-EC on bulk dry fertilizers give weed control equal to VERNAM 7-E or VERNAM 7-E/TREFLAN 4-EC applied as a spray in water or liquid fertilizer. However, uniform impregnation of herbicide solution on the dry fertilizer particles and uniform application in the field are necessary to assure good results.

For impregnating pesticides on dry fertilizers, use a closed rotary-drum mixer of a similar type of closed blender equipped with suitable spray equipment. The spray nozzle or (nozzles) should be positioned inside of the mixer to provide uniform spray coverage of the tumbling fertilizer. For the VERNAM 7-E/TREFLAN 4-EC combination, premix in the proper use ratio to prepare a uniform solution 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 VERNAM 7-E or VERNAM 7-E/TREFLAN 4-EC provides a satisfactory, dry mixture. If the absorptive capacity is inadequate, use of a highly absorptive powder is required to provide a dry, flowable mixture. Microcel

E(Johns-Manville Products Cor.) is the recommended absorbent powder. It should be added separately and uniformly to the prepared VERNAM 7E or VERNAM 7-E/TREFLAN 4-EC fertilizer mixture, in a quantity that is sufficient to provide a suitably flowable mixture. Generally less than 2% by weight of Microcel E is required. The amount of product actually required in the manufacture of individual fertilizer mixture should be determined carefully for each production operations. This is necessary to ensure that the amount of VERNAM 7-E/TREFLAN 4-EC actually contained in the mixture applied to the soil represents the correct rate of use.

All VERNAM 7-E and TREFLAN 4-EC label recommendations regarding rates per acre, soil incorporation, application, cautions, general use precautions and other directions must be followed. All individual state regulations relating to bulk dry fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the fertilizer and VERNAM 7-E and/or VERNAM/TREFLAN 4-EC mixture. A minimum of 200 pounds and a maximum of 450 pounds of approved ingredients* impregnated with VERNAM 7-E/TREFLAN 4-EC at the recommended rate must be applied per acre.

Bulk fertilizer impregnated with VERNAM 7-E should be applied immediately, not stored. It is recommended that all bulk containers be tightly covered while the product is being transported and applied to reduce chance of VERNAM 7-E loss via volatilization.

***Approved Dry Fertilizer Ingredients**

Ammonium Sulfate	21	0	0
Diammonium Phosphate	18	46	0
Potassium Chloride	0	0	60
(Single) Superphosphate	0	20	0
Triple Superphosphate	0	46	0
Urea	45	0	0
Ammonium Phosphate-Sulfate	16	20	0
Potassium Sulfate	0	0	52

NOTE: Sul-PO-MAG, K-MAG, and 11-48-0 have been shown to be compatible with VERNAM 7-E plus TREFLAN 4-EC and are approved for use.

VERNAM 7E TYPICAL PHYSICAL DATA

Pounds/Gallon, 20/20°C	7.88 Approximate (varies with temperature)
Flashpoint:	186°F (tagliabue closed cup)
Viscosity:	Sprayable down to minus 20°F

**RATE CHART FOR THE IMPREGNATION OF DRY BULK FERTILIZERS
WITH VERNAM 7-E AND VERNAM/TREFLAN 4-EC ADDED TO A TON OF FERTILI**

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Fertilizer Rate Per Acre	TREFLAN 4-EC Rate/Acre					
	1 3/4 pts	2 1/3 pts	3 pts	3 1/2 pts	4 1/2 pts	7 pts
200 lbs.	8 3/4 qts/ton	11 2/3 qts/ton	15 qts/ton	17 1/2 qts/ton	22 1/2 qts/ton	35 qts/ton
250 lbs.	7 qts/ton	9 1/3 qts/ton	12 qts/ton	14 qts/ton	18 qts/ton	28 qts/ton
300 lbs.	5 4/5 qts/ton	7 3/4 qts/ton	10 qts/ton	11 2/3 qts/ton	15 qts/ton	23 qts/ton
350 lbs.	5 qts/ton	6 2/3 qts/ton	8 3/5 qts/ton	10 qts/ton	13 qts/ton	20 qts/ton
400 lbs.	4 1/3 qts/ton	5 4/5 qts/ton	7 1/2 qts/ton	8 3/4 qts/ton	11 1/4 qts/ton	17 1/2 qts/ton
450 lbs.	3 4/5 qts/ton	5 1/5 qts/ton	6 2/3 qts/ton	7 4/5 qts/ton	10 qts/ton	15 1/2 qts/ton

*Refer to application rates under "APPLICATION DIRECTIONS".

approved waste disposal facility.

CONTAINER DISPOSAL:

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.

WARRANTY - CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a conditions of sale by Drexel Chemical Company and is accepted as such by the Buyer.