



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
6610C017

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
MICHAEL AUSTIN 304-558-2402

RFQ COPY
 TYPE NAME/ADDRESS HERE

Townsend Chemical, LLC
 9211 E Jackson St
 Selma IN 47383

DIVISION OF HIGHWAYS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
02/23/2010	Net 30	Best Way	Destination	Pre paid

BID OPENING DATE: 03/31/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001				675-85		
FURNISH HERBICIDES OPEN END CONTRACT TO PROVIDE THE MATERIALS NECESSARY FOR HERBICIDES FOR THE WEST VIRGINIA DIVISION OF HIGHWAYS TO BE USED IN ALL TEN (10) DISTRICTS PER THE ATTACHED SPECIFICATIONS. THE MODEL/BRAND/SPECIFICATIONS NAMED HEREIN ESTABLISH THE ACCEPTABLE LEVEL OF QUALITY ONLY AND ARE NOT INTENDED TO REFLECT A PREFERENCE OR FAVOR ANY PARTICULAR BRAND OR VENDOR. VENDORS WHO ARE BIDDING ALTERNATES SHOULD SO STATE AND INCLUDE PERTINENT LITERATURE AND SPECIFICATIONS. FAILURE TO PROVIDE INFORMATION FOR ANY ALTERNATES MAY BE GROUNDS FOR REJECTION OF THE BID. THE STATE RESERVES THE RIGHT TO WAIVE MINOR IRREGULARITIES IN BIDS OR SPECIFICATION IN ACCORDANCE WITH SECTION 148-1-4(F) OF THE WEST VIRGINIA LEGISLATIVE RULES AND REGULATIONS. MANDATORY PRE-BID A MANDATORY PRE-BID WILL BE HELD ON FRIDAY, 03/12/10 A 10:00 AM IN PURCHASING CONFERENCE ROOM, BLDG 15. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.						

RECEIVED
 MAR 31 A 10:12
 PURCHASING DIVISION
 STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE	TELEPHONE	DATE	
<i>Norman Skant</i>	765-289-4407	3/30/10	
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE	
GenOps Mgr	26-1570197		

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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Townsend Chemical, LLC
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 Selma IN 47383

DIVISION OF HIGHWAYS
 VARIOUS LOCALES AS INDICATED
 BY ORDER

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
02/23/2010	Net 30	Best Way	Destination	Pre Paid

BID OPENING DATE: **03/31/2010** BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE. THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER-S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL PORTION OF THE PRE-BID WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.</p> <p>WRITTEN QUESTIONS WILL BE ACCEPTED THROUGH THE CLOSE OF BUSINESS (5:00, EST) FRIDAY, 03/05/2010.</p> <p>SEND YOUR QUESTIONS TO: PURCHASING DIVISION ATTENTION MICHAEL AUSTIN 2019 WASHINGTON ST. E. CHARLESTON, WV 25305</p> <p>QUESTIONS MAY BE SENT VIA FAX, E-MAIL, OR REGULAR MAIL. E-MAIL: MICHAEL.D.AUSTIN@WV.GOV FAX: 304-558-4115</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
<i>Norman S. Cantt</i>	800-616-4221	3/30/10
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
Gen Ops Mgr	26-1570197	

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<p>CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 05/26/2009</p> <p>EXHIBIT 10</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Norman S Gantt</i>	TELEPHONE 800-616-4221	DATE 3/30/10
TITLE Geh Ops Mgr	FEIN 26-1570197	ADDRESS CHANGES TO BE NOTED ABOVE

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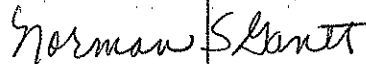
RFQ COPY
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LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
REQUISITION NO.:						
ADDENDUM ACKNOWLEDGEMENT						
I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO M PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.						
ADDENDUM NO.'S:						
NO. 1 ✓ XXXXXX						
NO. 2 ✓						
NO. 3 ✓						
NO. 4 ✓						
NO. 5 ✓						
I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.						
VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.						
 SIGNATURE .. Townsend Chemical, LLC COMPANY						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Norman Slant</i>	TELEPHONE 800-616-4221	DATE 3/30/10	
TITLE Gen Ops Mgr	FEIN 26-1570197	ADDRESS CHANGES TO BE NOTED ABOVE	

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..... 3/30/10 DATE						
NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID. REV. 09/21/2009 EXHIBIT 4 LOCAL GOVERNMENT BODIES: UNLESS THE VENDOR INDICATES IN THE BID HIS REFUSAL TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO COUNTY, SCHOOL, MUNICIPAL AND OTHER LOCAL GOVERNMENT BODIES, THE BID SHALL EXTEND TO POLITICAL SUBDIVISIONS OF THE STATE OF WEST VIRGINIA. IF THE VENDOR DOES NOT WISH TO EXTEND THE PRICES, TERMS, AND CONDITIONS OF THE BID TO ALL POLITICAL SUBDIVISIONS OF THE STATE, THE VENDOR MUST CLEARLY INDICATE SUCH REFUSAL IN HIS BID. SUCH REFUSAL SHALL NOT PREJUDICE THE AWARD OF THIS CONTRACT IN ANY MANNER. REV. 3/88 PURCHASING CARD ACCEPTANCE: THE STATE OF WEST VIRGINIA CURRENTLY UTILIZES A VISA PURCHASING CARD PROGRAM WHICH IS ISSUED THROUGH A BANK. THE SUCCESSFUL VENDOR MUST ACCEPT THE STATE OF WEST VIRGINIA VISA PURCHASING CARD FOR PAYMENT OF ALL ORDERS PLACED BY ANY STATE AGENCY AS A CONDITION OF AWARD.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Norman S. Gantt</i>	TELEPHONE 800-616-4221	DATE 3/30/10
TITLE Gen Ops Mgr	FEIN 26-1570197	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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BID OPENING DATE: 03/31/2010		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOF	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p>DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: 33</p> <p>RFQ. NO.: 6610C017</p> <p>BID OPENING DATE: 3/31/10</p> <p>BID OPENING TIME: 1:30pm</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p>765-289-4451</p> <p>CONTACT PERSON (PLEASE PRINT CLEARLY):</p> <p>Norman S Gantt</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Norman S Gantt</i>	TELEPHONE 800-616-4221	DATE 3/30/10	
TITLE Gen Ops Mgr	FEIN 26-1570197	ADDRESS CHANGES TO BE NOTED ABOVE	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

1. SPECIFICATIONS

The following sections of the West Virginia Department of Transportation, Division of Highways Standard Specification Roads and Bridges, adopted 2000, as modified by the current Supplemental Specifications shall apply to the administration of this Contract: 101, 102.4, 102.5, 105.1, 105.3, 105.4, 105.10, 105.11, 105.12, 105.13, 106.3, 106.4, 106.5, 106.6, 106.7, 106.9, 107.1, 107.2, 107.3, 107.14, 107.19, 107.20, 108.8, 109.1, 109.2, and 109.20

The terms "Contractor" and "Vendor" used in the above specifications or this contract are interchangeable. Contractor shall mean Vendor and Vendor shall mean Contractor.

West Virginia Department of Transportation, Division of Highways Standard Specifications Roads and Bridges, adopted 2000 and the current Supplemental Specifications may be obtained from:

Office of the Director of Contract Administration Division
Room A-729
West Virginia Division of Highways
State Capitol Complex, Building 5
Charleston, West Virginia 25305

Herbicide furnished under this contract shall conform to the physical and chemical properties set out in the EPA Registration of the product provided by the Vendor.

2. BIDDING INSTRUCTIONS

Vendors may quote on any or all of the chemical products listed herein.

It is the intent to award a Statewide Contract for each chemical product listed herein. The contract will be awarded to the lowest compliant bidder for each item. The award for each item will be based on the bid price per gallon, pound or ounce and not the lot or container amount.

The vendor shall list the trade name and EPA Registration Number, where applicable, on the Bidding Schedule for each chemical product bid. Failure to list this information may result in the disqualification of the vendor's bid on that product.

Vendors shall not qualify bids. Any qualification of bids or any modification of the specifications or conditions governing the bids may be cause to reject bids.

The successful vendor shall furnish two product labels, for each product awarded, to the West Virginia Division of Highways. The labels shall provide pertinent information regarding product storage and handling or this information shall otherwise be provided with each shipment.

Equivalency where requested as, chemical name or equivalent, shall mean equal and not necessarily identical. Prior to award of low bid the Division of Highways may require samples for evaluation to determine equivalency when applicable. Product specifications and technical information should be submitted with bid and may also be used to determine equivalency. The final determination of equivalency will be made by the Division of Highways and award will be based upon the item providing the intended service or result and unit price.

3. CONTRACT AWARD

Qualified vendors who submit a valid low bid will be awarded a contract for those items for which their bid is low.

The State of West Virginia reserves the right to make multiple awards on this contract when it is in the best interest of the State to do so.

9 4. **ACCEPTANCE PLAN**

With each delivery of herbicide products to the Division, the vendor shall certify that the products so delivered do conform to the properties described in the EPA Registration.

Material failing to comply with the quality requirement will not be accepted.

5. **TESTING PROCEDURES**

Upon award of contract, the successful vendor shall supply the Division of Highways, Materials Control, Soil and Testing Division, 312 Michigan Avenue, Charleston, West Virginia 25311, the proper testing procedures to determine the presence and concentration of the Herbicide in flowing water.

6. **BID QUANTITIES**

Vendor should base quotation on estimated herbicide use as follows:

DOH-1H	3,000	gallons
DOH-2H	6,000	gallons
DOH-3H	100	pounds
DOH-4H	250	gallons
DOH-5H	150	gallons
DOH-6H	600	gallons
DOH-7H	500	gallons
DOH-8H	250	gallons
DOH-9H	2000	pounds
DOH-10H	100	gallons
DOH-11H	25	gallons
DOH-12H	50	gallons
DOH-13H	50	gallons
DOH-14H	150	pounds
DOH-15H	25	cases
DOH-16H	10	pounds
DOH-17H	100	gallons
DOH-18H	50	pounds
DOH-19H	25	gallons
DOH-20H	50	gallons
DOH-21H	300	gallons
DOH-22H	300	gallons
DOH-23H	100	gallons
DOH-24H	50	pounds
DOH-25H	100	pounds
DOH-26H	16	gallons
DOH-27H	16	gallons
DOH-28H	50	pounds
DOH-29H	400	ounces
DOH-30H	50	gallons
DOH-31H	100	gallons
DOH-32H	100	pounds
DOH-33H	100	pounds
DOH-34H	400	pounds
DOH-35H	50	pounds
DOH-36H	100	gallons
DOH-37H	100	gallons
DOH-38H	100	pounds

Vendors are cautioned that the above quantities are estimates only. Actual orders will be for the required needs of the Division of Highways.

7. DELIVERY

Materials under this contract are to be shipped prepaid F.O.B. delivery to West Virginia Division of Highways District Storerooms as follows:

District One	Charleston
District Two	Huntington
District Three	Parkersburg
District Four	Clarksburg
District Five	Burlington
District Six	Moundsville
District Seven	Weston
District Eight	Elkins
District Nine	Lewisburg
District Ten	Princeton

Materials should be shipped to the location and in the quantity specified in State Contract Purchase Orders (SCOs) within 20 days after the SCO is issued by the Division of Highways.

8. VENDOR'S INVOICES

Vendor's invoices must be submitted in original and four copies and contain the following:

- a. Division of Highways State Contract Order (SCO) Numbers, and this Contract Number.
- b. Total quantity and unit price with the total cost of each type of material furnished.

Note: Under no circumstance will the West Virginia Division of Highways accept, or pay for, quantities of material in excess of the quantity stated on the State Contract Purchase Order.

9. RESTRICTED AND NON-RESTRICTED HERBICIDES

Herbicide products which have been declared RESTRICTED in their use by the Environmental Protection Agency (EPA) must be applied under the supervision of a licensed herbicide applicator. The Department reserves the right to disallow the use of RESTRICTED herbicides when non-restricted herbicides are available to achieve the same objective.

10. TRAINING AND TECHNICAL ASSISTANCE

In order to bid on and be awarded items on this contract the vendor must have a competent representative available to provide training and technical assistance as required or upon request by WVDOH personnel, including but not limited to, an annual West Virginia Division of Highways Vegetation Management Seminar and attend the mandatory prebid meeting. Each bidder should submit name and telephone number of representative with bid. The representative shall have a valid Category 7 certification in West Virginia and the company shall have a valid Category 12 certification in West Virginia. Copies of these certifications should be submitted with the bid.

Failure to comply will result in awarding that vendor's items to the next lowest compliant bidder.

<u>NAME OF REPRESENTATIVE</u>	<u>PHONE NUMBER</u>	<u>ADDRESS</u>
Daniel Matteson	614-352-3048	9211 E Jackson St Selma IN 47383
Tom Schanher	513-319-8028	9211 E Jackson St Selma In 47383

11. LIST OF APPROVED HERBICIDES

The Product Trade Name shown is the approved herbicide to be bid. No substitutes will be accepted.

12. ADJUVANTS, SAFETY EQUIPMENT AND MISCELLANEOUS

Unless a Product Trade Name is requested these items will be awarded based on the lowest unit price bid for acceptable performance. Lowest unit price bid will be determined by comparing minimum label recommendations per 100 gallons of spray solution and unit price. Acceptable performance will be determined by District personnel assessment of desired results and may include, but is not limited to, field test evaluations.

13. MANDATORY PRE-BID

There will be a mandatory pre-bid meeting on March 12, 2010, at 10:00 AM.

Location:

Purchasing Division Conference Room
2019 Washington Street, East, Building 15
Charleston, WV 25305

HERBICIDESCHEMICAL FORMULATIONPercent Concentration/
Pounds per Gallon
of Active Ingredients

DOH-1H WATER SOLUBLE EMULSIFIABLE CONCENTRATE CONTAINING:
Ammonium Salt of Fosamine with Surfactant 4 lbs/gallon

Product Trade Name Krenite SEPA Registration Number 352-395

Supplied in 2 1/2 gallon containers in lots of 5 gallons.

A) @ \$ 61.07 per gallon (i.e. \$ 305.53 per lot)

Supplied in 15 gallon returnable/refillable containers.

B) @ \$ 45.76 per gallon (i.e. \$ 686.40 per lot)

DOH-2H WATER SOLUBLE EMULSIFIABLE CONCENTRATE CONTAINING:
Isopropylamine Salt of Glyphosate 50.2%
Phosphate Ester Surfactant

Product Trade Name Roundup Pro ConcentrateEPA Registration Number 524-529

Supplied in 30 gallon plastic returnable drums.

A) @ \$ 22/36 per gallon (i.e. \$ 670.80 per drum)

Supplied in 2.5 gallon containers in lots of 5 gallons.

B) @ \$ 22.36 per gallon (i.e. \$ 111.80 per lot)

Supplied in 15 gallon returnable/refillable containers.

C) @ \$ 22.36 per gallon (i.e. \$ 335.40 per lot)

Supplied in 150 gallon returnable/refillable shuttle.

D) @ \$ 22.36 per gallon (i.e. \$ 3354.00 per shuttle)

The Bid Schedules are ready for download on Purchasing's Web site at
www.state.wv.us/admin/purchase

Vendors should type Bid Schedules

DOH-3H

DISPERSIBLE GRANULES CONTAINING:

Sulfometuron Methyl

75%

Product Trade Name Oust XPEPA Registration Number 352-601

Supplied in 3 pound containers in lots of 24 pounds.

- A) @ \$ 52.32 per pound (i.e. \$ 1255.68 per lot)
- B) Supplied in 3 pound jug
- @ \$ 52.32 per pound (i.e. \$ 156.96 per jug)

DOH-4H

WATER SOLUBLE AQUEOUS SUSPENSION CONTAINING:

Oryzalin

4 lbs/gallon

Product Trade Name Oryzalin 4 ProEPA Registration Number 72167-15-74477

Supplied in 2.5 gallon containers in lots of 5 gallons.

- A) @ \$ 60.50 per gallon (i.e. \$ 302.50 per lot)

DOH-5H

AQUEOUS SOLUTION CONTAINING:

Imazapyr

2 lbs/gallon

Product Trade Name Arsenal PowerlineEPA Registration Number 241-431

Supplied in 1 quart containers in lots of 4 quarts

- A) @ \$ 28.89 per quart (i.e. \$ 115.56 per lot)
- Supplied in 2.5 gallon containers in lots of 5 gallons
- B) @ \$ 71.69 per gallon (i.e. \$ 358.45 per lot)

Supplied in 15 gallon drums

- C) @ \$ 70.64 per gallon (i.e. \$ 1059.60 per drum)

DOH-6H

AQUEOUS CARRIER CONTAINING:

Pendimethalin

3.8 lbs/gallon

Product Trade Name Pendulum AquaCapEPA Registration Number 241-416

Supplied in 2.5 gallon container in lots of 5 gallons

- A) @ \$ 49.43 per gallon (i.e. \$ 247.15 per lot)

DOH-7H

WATER SOLUBLE CONCENTRATE CONTAINING:

Triclopyr

3 lbs/gallon

Product Trade Name Garlon 3AEPA Registration Number 62719-37

Supplied in 2.5 gallon containers in lots of 5 gallons

- A) @ \$ 58.21 per gallon (i.e. \$ 291.05 per lot)

Supplied in 30 gallon containers

- B) @ \$ 58.21 per gallon (i.e. \$ 1746.30 per container)

Supplied in 15 gallon continuum returnable/refillable containers in pallets of 9 containers

- C) @ \$ 58.21 per gallon (i.e. \$ 7858.35 per pallet)

DOH-8H

WATER SOLUBLE CONCENTRATE CONTAINING:

Triclopyr

4 lbs/gallon

Product Trade Name Garlon 4 UltraEPA Registration Number 62719-527

Supplied in 2.5 gallon containers in lots of 5 gallons

- A) @ \$ 73.62 per gallon (i.e. \$ 368.10 per lot)

Supplied in 30 gallon containers

- B) @ \$ 73.62 per gallon (i.e. \$ 2208.60 per container)

Supplied in 15 gallon continuum returnable/refillable containers in pallets of 9 containers

- C) @ \$ 73.62 per gallon (i.e. \$ 9938.70 per pallet)

DOH-9H

A WATER SOLUBLE DISPERSIBLE GRANULE CONTAINING:
Diuron

80.0%

Product Trade Name Karmex XPEPA Registration Number 352-692

Supplied in 5 pound bags in lots of 10 bags

A) @ \$ 6.66 per pound (i.e. \$ 333.00 per lot)

Supplied in 25 pound bags

B) @ \$ 6.66 per pound (i.e. \$ 166.50 per bag)

DOH-10H

WATER SOLUBLE LIQUID CONTAINING:
Dimethylamine Salt of 2, 4-D acid

3.8 lbs/gallon

Product Trade Name DM A4EPA Registration Number 62719-3

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 16.00 per gallon (i.e. \$ 80.00 per lot)

Supplied in 30 gallon drums

B) @ \$ 16.00 per gallon (i.e. \$ 480.00 per drum)

C) Supplied in 15 gallon returnable/refillable containers in pallets of 9 containers

@ \$ 16.00 per gallon (i.e. \$ 2160.00 per lot)

DOH-11H

WATER SOLUBLE LIQUID CONTAINING:
Diethanolamine Salt of Mefluidide
Ammonium Salt of Imazethapyr
Ammonium Salt of Imazapyr

21.45%

4.09%

0.15%

Product Trade Name StrongholdEPA Registration Number 2217-802

Supplied in 1 gallon containers in lots of 4 gallons

A) @ \$ 279.27 per gallon (i.e. \$ 1117.08 per lot)

DOH-12H

WATER SOLUBLE LIQUID CONTAINING:

Ammonium Salt of Imazapic

23.6%

Product Trade Name PlateauEPA Registration Number 241-365

Supplied in 1 gallon containers in lots of 2 gallons

A) @ \$ 137.42 per gallon (i.e. \$ 274.84 per lot)

Supplied in 2.5 gallon containers in lots of 5 gallons

B) @ \$ 132.54 per gallon (i.e. \$ 662.70 per lot)

Supplied in 1.44 oz packets 14 packets per lot

C) @ \$ No Bid per packet (i.e. \$ _____ per lot)

Supplied in 1 qt containers 4 qts per lot

D) @ \$ No Bid per qt (i.e. \$ _____ per lot)

E) Supplied in 15 gallon containers

@ \$ 130.63 per gallon (i.e. \$ 1959.45 per lot)

DOH-13H

A DISPERSIBLE LIQUID CONTAINING:

Hexazinone

2 lbs/gallon

Product Trade Name Velpar LEPA Registration Number 352-392

Supplied in 2 ½ gallon containers in lots of 5 gallons

A) @ \$ 65.12 per gallon (i.e. \$ 325.60 per container)

DOH-14H

DRY FLOWABLE CONTAINING:

Metsulfuron Methyl

60%

Product Trade Name Escort XPEPA Registration Number 352-439

Supplied in 16 oz. containers in lots of 8 lbs. (8-16 oz. ctrs.)

A) @ \$ 6.75 per oz. (i.e. \$ 864.00 per lot)

Supplied in 16 oz. jug

B) @ \$ 6.75 per oz (i.e. \$ 108.00 per jug)

C) Supplied in 64 oz Jug returnable/refillable

@ \$ 6.75 per oz (i.e. \$ 432.00 per jug)

DOH-15H

WATER SOLUBLE GRANULE HERBICIDE CONTAINING:

Ammonium Salt of Glyphosate

71.4%

Product Trade Name Roundup Pro dry

EPA Registration Name _____

A) Supplied in 23.25 lb. box

@ \$ No Bid 23.25 lb. box (i.e. \$ _____ per lb.)

DOH-16H

DRY FLOWABLE CONTAINING:

Chlorsulfuron

75%

Product Trade Name Telar XPEPA Registration Number 352-654

Supplied in 8 x 16 ounce containers to a case

A) @ \$ 15.06 per ounce (i.e. \$ 1927.68 per container)

- DOH-17H** **A LIQUID SOLUTION CONTAINING:**
- Isocetyl ester of 2,4-Dichlorophenoxyacetic Acid **32.48%**
- 2-ethylhexyl ester of +R-2-(2,4-Dichlorophenoxy) Propionic Acid **15.90%**
- Dicamba (3,6-Dichloro-o-anisic Acid) **5.38%**
- Product Trade Name **BK-800**
- EPA Registration Number 2217-758
- Supplied in 2.5 gallon containers in lots of 5 gallons
- A) @ \$ 66.83 per gallon (i.e. \$ 334.15 per lot)
- Supplied in 30 gallon drums
- B) @ \$ 53.90 per gallon (i.e. \$ 1617.00 per drum)
-
- DOH-18H** **DRY FLOWABLE CONTAINING:**
- Tebuthiuron **80%**
- Product Trade Name **Spike 80 DF**
- EPA Registration Number 62719-107
- Supplied in 4 pound bags in lots of 24 pounds
- A) @ \$ 23.00 per pound (i.e. \$ 552.00 per lot)
- Supplied in 25 pound bags
- B) @ \$ 21.85 per pound (i.e. \$ 546.25 per lot)
-
- DOH-19H** **A WATER SOLUBLE EMULSIFIABLE CONCENTRATE CONTAINING:**
- Clopyralid **3 lbs/gallon**
- Product Trade Name **Transline**
- EPA Registration Number 62719-259
- Supplied in 2.5 gallon containers in lots of 5 gallons
- A) @ \$ 227.70 per gallon (i.e. \$ 1138.50 per lot)
- B) Supplied in .5 gallon containers in lots of 2 gallons
- @ \$ 258.76 per gallon (i.e. \$ 517.52 per lot)

DOH-20H

AQUEOUS SOLUTION CONTAINING:

Isopropylamine Salt of Imazapyr

27.6%

19

Product Trade Name Stalker

EPA Registration Number 241-398

Supplied in 1 quart containers in lots of 4 quarts

A) @ \$ 64.80 per quart (i.e. \$ 259.20 per lot)

DOH-21H

AQUEOUS SOLUTION CONTAINING:

Diglycolamine Salt of 3, 6-Dichloro-0-Anisic Acid

4 lbs/gallon

Product Trade Name Vanguish

EPA Registration Number 228-397

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 59.67 per gallon (i.e. \$ 298.35 per lot)

Supplied in 15 gallon returnable/refillable containers in pallets of 9 containers

B) @ \$ 57.82 per gallon (i.e. \$ 7805.70 per pallet)

DOH-22H

AQUEOUS SOLUTION CONTAINING:

Triclopyr

.75 lbs/gallon

Product Trade Name Pathfinder II

EPA Registration Number 62719-176

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 34.24 per gallon (i.e. \$ 171.20 per lot)

DOH-23H

WATER SOLUBLE EMULSIFIABLE CONCENTRATE CONTAINING:

Isopropylamine Salt of Glyphosate

53.8%

Product Trade Name Rodeo

EPA Registration Number 62719.324

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 14.55 per gallon (i.e. \$ 72.75 per lot)

Supplied in 30 gallon plastic returnable drums

B) @ \$ 14.55 per gallon (i.e. \$ 436.50 per drum)

DOH-24H A LIQUID CONTAINING:
Aminopyralid 40.6%

Product Trade Name Milestone VM

EPA Registration Number 62719-537

Supplied in 1 quart containers 12 containers per lot

A) @ \$ No Bid per quart (i.e. \$ _____ per lot)

Supplied in 2.5 gallon containers 5 gallons per lot

B) @ \$ 294.46 per gallon (i.e. \$ 1472.30 per lot)

DOH-25H WATER DISPERSIBLE GRANULAR MATERIAL CONTAINING:
Prodiamine 65%

Product Trade Name Endurance

EPA Registration Number _____

Supplied in 10 pound containers 50 pounds per lot

A) @ \$ No Bid per pound (i.e. \$ _____ per lot)

DOH-26H EMULSIFIABLE CONCENTRATE CONTAINING:
Quizalofop P-Ethyl 0.88 lbs/gallon

Product Trade Name Assure II

EPA Registration Number _____

Supplied in 1 gallon containers in lots of 4 gallons

A) @ \$ No Bid per gallon (i.e. \$ _____ per lot)

DOH-27H EMULSIFIABLE CONCENTRATE CONTAINING:
Fluazifop-P-butyl 6.75%

Product Trade Name Ornamec

EPA Registration Number _____

Supplied in 1 gallon containers in lots of 4 gallons

A) @ \$ No Bid per gallon (i.e. \$ _____ per lot)

DOH-28H

A DISPERSIBLE GRANULE CONTAINING:Imazapyr
Diuron7.78%
62.22%Product Trade Name Sahara DGEPA Registration Number 241-372

Supplied in 10 pound bags in lots of 40 pounds.

A) @ \$ 11.16 per pound (i.e. \$ 4464.00 per lot)

DOH-29H

A WATER SOLUBLE DRY GRANULE CONTAINING:

Sulfosulfuron

75%

Product Trade Name OutriderEPA Registration Number 524-500

Supplied in 20 oz bottles in lots of 200 oz

A) @ \$ 13.73 per oz (i.e. \$ 2746.00 per lot)

DOH-30H

A LIQUID CONTAINING:

Diuron

40%

Product Trade Name ~~XDiuron XL~~ Alt Direx 4LEPA Registration Number 352-678

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 23.89 per gallon (i.e. \$ 119.45 per lot)

DOH-31H

A LIQUID CONTAINING

Fluroxypyr

26.2%

Product Trade Name Vista XRTEPA Registration Number 62719-586

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 172.04 per gallon (i.e. \$ 860.20 per lot)

DOH-32H

WETTABLE GRANULE FORMULATION CONTAINING

Sodium salt of diflufenzopy: 2-[1-({3,5-difluorophenylamino} carbonyl) hydrazono} ethyl)-3-pyridinecarboxylic acid, sodium
Sodium salt of 3,6-dichloro-*p*-anisic acid

21.4%
55.0%

Product Trade Name Overdrive

EPA Registration Number 7969-150

Supplied in 7 1/2 lb. jugs. 30 lbs. per case

A) @ \$ 29.92 per lb. (i.e. \$ 897.60 per case)

DOH-33H

DISPERSIBLE GRANULES CONTAINING

Sulfometuron Methyl
Chlorsulfuron

56.25%
18.75%

Product Trade Name Landmark XP

EPA Registration Number 352-645

Supplied in 4 lb. jugs in lots of 32 lbs.

A) @ \$ 102.72 per lb. (i.e. \$ 3287.04 per case)

Supplied in 64 oz jug returnable/refillable

B) @ \$ 6.42 per oz. (i.e. \$ 410.88 per jug)

DOH-34H

DISPERSIBLE GRANULES CONTAINING

Sulfometuron Methyl
Metsulfuron Methyl

56.25%
15.00%

Product Trade Name Oust Extra

EPA Registration Number 352-622

Supplied in 4 lb. jugs in lots of 32 lbs.

A) @ \$ 52.32 per lb. (i.e. \$ 1674.24 per lot)

Supplied in 64 oz. returnable/refillable

B) @ \$ 3.27 per oz. (i.e. \$ 209.28 per jug)

Supplied in 12 lb. jugs

C) @ \$ X No Bid per lb. (i.e. \$ _____ per jug)

DOH-35H

A DRY FLOWABLE GRANULE CONTAINING:

Bromacil
Diuron

40%
40%

Product Trade Name Krovar I DF

EPA Registration Number 352-505

Supplied in 6 lb containers in lots of 8 containers

A) @ \$ 12.73 per lb (i.e. \$ 611.04 per lot)

DOH-36H

A LIQUID CONTAINING:

Imazapic
Glyphosate

8.13%
21.94%

Product Trade Name Journey

EPA Registration Number 241-417

~~Supplied in 7 1/2 lb jugs, 30 lbs per case~~

~~EPA Registration Number~~

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 86.67 per gallon (i.e. \$ 433.35 per lot)

DOH-37H

A LIQUID CONTAINING:

Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-Anisic Acid)

24.58%
12.82%

Product Trade Name Veteran 720

EPA Registration Number 228-295

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 34.02 per gallon (i.e. \$ 170.10 per lot)

Supplied in 30 gallon drums

B) @ \$ 27.53 per gallon (i.e. \$ 825.90 per drum)

DOH-38H

DISPERSIBLE GRANULES CONTAINING

Chlorsulfuron
Sulfometuron Methyl
Sulfentrazone

9%
18%
48%

Product Trade Name Throttle XP

EPA Registration Number 352-725

Supplied in 3.9 lb. containers, 8 containers per case

A) @ \$ 102.99 per lb (i.e. \$ 3213.29 per case)

ADJUVANTS

DOH-1A

A WATER SOLUBLE BLUE LIQUID SPRAY PATTERN INDICATOR

Product Trade Name Bullseye

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ 43.74 per gallon (i.e. \$ 218.70 per lot)

DOH-2A A MISCIBLE-DISPERSIBLE LIQUID DEFOAMER (30% Active Ingredient)

Product Trade Name Knok-It 664

Supplied in Quart containers in lots of 12

A) @ \$ 6.20 per (i.e. \$ 74.40 per lot)

DOH-3A A DILUENT WITH EMULSIFIERS

Product Trade Name Hygrade EC or Arborchem Basal Oil or Bark Oil EC
Or Aienza Basal Oil or Penevator Alt Ax-It Oil

Supplied in 15 gallon containers in lots of 135 gallons

A) @ \$ 12.19 per gallon (i.e. \$ 1645.65 per lot)

DOH-4A NON-IONIC SURFACTANT (90% Active Ingredient)

Product Trade Name Invde 90

Supplied in 2.5 gal containers in lots of 5 gallons

A) @ \$ 11.39 per gallon (i.e. \$ 56.95 per lot)

DOH-5A A GRANULAR/FLAKE DRIFT CONTROL AGENT

Product Trade Name _____

Supplied in _____ containers in lots of _____ containers

A) @ \$ No Bid per _____ (i.e. \$ _____ per lot)

DOH-6A A LIQUID DRIFT CONTROL AGENT

Product Trade Name Mist-Trol 336

Supplied in 2.5 gal containers in lots of 5 gallon

A) @ \$ 23.25 per gal (i.e. \$ 116.25 per lot)

DOH-7A AQUATIC SURFACTANT

Product Trade Name Invade 00

Supplied in X 2.5 gal containers in lots of 5 gallons

A) @ \$ 11.39 per gallon (i.e. \$ 56.95 per lot)

DOH-8A A WATER SOLUBLE LIQUID SPRAY PATTERN INDICATORProduct Trade Name Blueprint PlusSupplied in 2.5 gallon containers in lots of 5 gallonsA) @ \$ No Bid per gallon (i.e. \$ _____ per lot)DOH-10A A NON-IONIC STICKER SPREADERProduct Trade Name Nu-Film-IRSupplied in 2 ½ gallon containers in lots of 5 gallonsA) @ \$ 36.92 per gallon (i.e. \$ 184.60 per lot)DOH-11A A READY TO USE FORMULA CONTAINING PARFFINIC OIL EMULSIFIERSProduct Trade Name Thinvert RTUSupplied in 2 ½ gallon jugs. 5 gallon per caseA) @ \$ No Bid per gallon (i.e. \$ _____ per case)Supplied in 15 gallon drumB) @ \$ No Bid per gallonDOH-12A A CONCENTRATE FORMULA CONTAINING PARFINNK OIL EMULSIFIERS AND SURFACTANTSProduct Trade Name Thinvert ConcentrateSupplied in 2 ½ gallon jugs. 5 gallon per caseA) @ \$ No Bid per gallon (i.e. \$ _____ per case)Supplied in 15 gallon drumB) @ \$ No Bid per gallon

SAFETY EQUIPMENT**DOH-1S** EMERGENCY SPILL KIT CONTAINING:

15 Universal Plus Sorbent Pads
 3 Cobra Coils
 1 Pair Safety Goggles
 1 Pair Latex Gloves
 1 Large Refuse Bag
 1 List of Environmental Compliance Telephone Numbers
 18" x 18" x 4"
 Vacuum Packed in Puncture Resistant Foil

Product Trade Name _____

A) @ \$ No Bid per each

DOH-2S A GRANULAR/FLAKE SPILL ABSORBENT

Product Trade Name _____

Supplied in _____ containers in lots of _____ containers

A) @ \$ No Bid per pound (i.e. \$ _____ per lot)

DOH-3S 3 LAYER FABRIC COVERALLS (ALL SIZES)

Product Trade Name Kleen Guard

Supplied in 12 ea/case

A) @ \$ No Bid per each (i.e. \$ _____ per case)

DOH-4S DISPOSABLE COVERALLS

Product Trade Name Tyvek

Supplied in 25 ea/case

A) @ \$ No Bid per each (i.e. \$ _____ per case)

DOH-5S 32 OZ. EYE WASH BOTTLE

Product Trade Name _____

Supplied per each

A) @ \$ No Bid per each

DOH-1M PRESSURE RINSER

Product Trade Name Easy Rinse

Supplied per each

A) @ \$ No Bid per each

DOH-2M HAND SOAP WITH CITRUS OIL

Product Trade Name Zep

Supplied in 32 oz. containers in lots of 20 containers per case

A) @ \$ No Bid per container (i.e. \$ _____ per case)

DOH-3M A BIOSTIMULANT CONTAINING:

Soluble Potash	1.00%
Iron	0.36%

Manure Extract	79.30%
Humic and Fulvic Acid Extract	9.00%
Kelp Extract	1.20%
Organo-Modified Silaxane Surfactant	0.36%

Product Trade Name Launch

Supplied in 2.5 gallon containers in lots of 5 gallons

A) @ \$ No Bid per gallon (i.e. \$ _____ per lot)

DOH-4M A WORK BOOT

Product Trade Name Iron Duke

Compliance EPA 40 CFR 170

Supplied per pair

A) @ Size (6-11) \$ No Bid per pair

B) @ Size (12 +) \$ No Bid per pair

DOH-5M

RUBBER BOOT/SHOE COVERS

28

Compliance EPA 40 CFR 170

Supplied per pair

- A) @ Size M (8-9) \$ No Bid per pair
- B) @ Size L (10-11) \$ No Bid per pair
- C) @ Size XL (12-13) \$ No Bid per pair

DOH-6M

SAFETY GOGGLES – indirect vent

Meets ANS1 287.1-1989

- A) @ \$ No Bid per each

DOH-7M

FACE SHIELD – positive lock headgear

Meets ANS1 287.1-1989 and
CAN1CSA-294 3-92 Specifications

@ \$ No Bid per each

DOH-8M

A 5-GALLON BACKPACK SPRAYER

Product Trade Name Birchmeier

- A) @ \$ 210.35 per sprayer

Gasket Set For Sprayer Pump

- B) @ \$ 21.68 per set

Hose Valve & Wand Repair Kit

- C) @ \$ 23.65 per kit

DOH-9M **NITRI-SOLVE 100% NITRILE GLOVES**
 15 mil 13" Nitrile Gloves

Compliance EPA 40 CFR 170

Sizes S, M, L, XL, or 2XL

- A) @ \$ No Bid per pair

DOH-10M **2-QUART HANDHELD PRESSURE SPRAYER**

Product Trade Name Toico

- A) @ \$ 19.10 per sprayer

DOH-11M **CLOSED SYSTEM BACKPACK SPRAYER**

Product Trade Name Birchmier BCS

- A) @ \$ 254.90 per sprayer

Gasket set for sprayer pump

- B) @ \$ 21.68 per set

Hose Valve & Wand repair kit

- A) @ \$ 23.65 per kit

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with West Virginia Code, §5A-3-37. (Does not apply to construction contracts). West Virginia Code, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the West Virginia Code. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

- 1. Application is made for 2.5% resident vendor preference for the reason checked: Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
2. Application is made for 2.5% resident vendor preference for the reason checked: Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
3. Application is made for 2.5% resident vendor preference for the reason checked: Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
4. Application is made for 5% resident vendor preference for the reason checked: Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
5. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked: Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
6. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked: Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: _____ Signed: _____
Date: _____ Title: _____

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

Not applicable

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: TOWNSEND CHEMICAL LLC

Authorized Signature:  Date: 03/30/10
MICHAEL MCCLURE, CHIEF FINANCIAL OFFICER

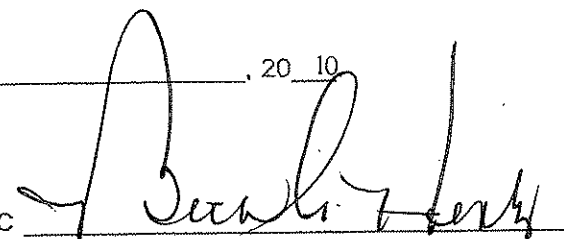
State of INDIANA

County of DELAWARE, to-wit:

Taken, subscribed, and sworn to before me this 30TH day of MARCH, 20 10

My Commission expires MARCH 1, 20 15.

AFFIX SEAL HERE

NOTARY PUBLIC 
BETH A. HENRY

WEST VIRGINIA DEPARTMENT OF AGRICULTURE
1900 Kanawha Blvd., East
Pesticide Regulatory Programs
Charleston, WV 25305-0190

LICENSED PESTICIDE APPLICATION BUSINESS

Issued to:

License No: 1136

Townsend Tree Service
P O Box 128
Parker City, IN 47368

Has met the requirements of the State Code of West Virginia, Chapter 19, Article 16A, Section 7, to engage in the business of applying pesticides.

Qualifying Individual: **Daniel T. Matteson**

Categories of Operation:

7 Right-of-Way/Industrial Weed

Date Issued
1/5/10

Expiration Date
12/31/2010



Commissioner of Agriculture

A handwritten signature in cursive script, appearing to read "Gene R. Douglas".

No. 5535

TOWNSEND CHEMICAL DIVISION

Date: 4-17-96

MATERIAL SAFETY DATA

1. PRODUCT IDENTIFICATION

TRADEMARK:

INVADE 90

SYNONYMS:
MOLECULAR FORMULA:

NONIONIC SURFACTANT
PROPRIETARY BLEND

2. INGREDIENTS

All components included in TSCA inventory.
Maximum of 1 ppm Ethylene Oxide (EO) (75-21-8) May be present in the product.
The OSHA PEL and ACGIH TLV for EO is 1 ppm.

3. PHYSICAL PROPERTIES

APPEARANCE AND ODOR: Clear Amber Liquid
Mild
BOILING POINT: >200 F
SPECIFIC GRAVITY: .995(+/- .05)
VAPOR DENSITY: (X) heavier () lighter than air
% VOLATILE (BY VOL): < 1%
EVAPORATION RATE: () faster (X) slower than ether
SOLUBILITY IN WATER: Soluble

4. FIRE AND EXPLOSION DATA

DOT CATEGORY Not regulated
FLASH POINT 116 Deg. F.
OSHA CATEGORY Combustible Liquid-Class III
EXTINGUISHING MEDIA Use National fire protection association Class B extinguishers (Carbon dioxide, water fog, dry chemical or foam). Water may also be used.
UNUSUAL FIRE AND EXPLOSION HAZARDS None Known
SPECIAL FIRE FIGHTING PROCEDURES Cool fire exposed containers with water. Wear NIOSH/OSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5. REACTIVITY DATA

STABILITY () unstable (x) stable
INCOMPATIBILITY (MATERIALS TO AVOID) Strong oxidizing agents such as hydrogen peroxide, bromine, and chromic acid.
HAZARDOUS POLYMERIZATION () may occur (x) will not occur
CONDITIONS TO AVOID None

6. WASTE DISPOSAL AND ENVIRONMENTAL RELEASES

ENVIRONMENTAL RELEASES Certain releases of any substance to the environment are prohibited by law and may require reporting to an environmental agency. Remove all sources of ignition. Wear personal protective equipment to avoid breathing vapors. Use non-sparking tools. For small spills, dike and absorb with inert material. Use emergency response professionals if managing a release is beyond the capability of in-house personnel.

WASTE DISPOSAL This material is not classified as an ignitable hazardous waste according to federal regulations. However, it may be in your state. Check with your state environmental agency to determine if this material is regulated in any way. No disposal method should be used which would pose an environmental or human health threat including any which would contaminate ground or surface waters.

7. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE Not established
EFFECTS OF OVEREXPOSURE

INHALATION Excessive exposure to vapors may cause respiratory irritation, nausea or vomiting.

SKIN CONTACT Moderate to severe irritation.
EYE CONTACT Severe irritation.
INGESTION May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

OTHER HEALTH EFFECTS Ethylene oxide has been determined to be a cancer and reproductive hazard. The trace levels of EO in this product are not expected to result in acute or long-term hazards when handled according to the precautions in Sections 8 and 9. However, they may accumulate in the head space of storage and transport vessels.

8. EMERGENCY AND FIRST AID PROCEDURES

INHALATION Remove from exposure to fresh air. Give artificial respiration or cardiopulmonary resuscitation (CPR) if required. If breathing is difficult, give oxygen. Keep warm and quiet. Get medical attention.

SKIN CONTACT Wash affected areas with soap and water. Do not use solvents. Remove contaminated clothing and wash before reuse. Get medical attention.

EYE CONTACT Flush with water for 15 minutes. Get medical attention.
INGESTION Get medical attention.

NOTE: THIS PRODUCT MAY CONTAIN SMALL AMOUNTS OF ETHYLENE OXIDE (EO) WHICH COULD ACCUMULATE IN THE HEADSPACE OF STORAGE AND TRANSPORT VESSELS. REPEATED/PROLONGED AIRBORNE EXPOSURES TO EO MAY BE HARMFUL SINCE EO IS A CANCER HAZARD AND REPRODUCTIVE HAZARD. OSHA HAS ESTABLISHED A 1.0 PPM 8-HOUR TWA FOR EO (29 CFR 1920.1047). SOME REQUIREMENTS OF THIS STANDARD MAY APPLY TO YOUR OPERATION.

9. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

Not required under normal operating conditions.

VENTILATION

Where employees may be exposed, provide general dilution or local exhaust ventilation in volume and pattern to keep level of hazardous ingredient in Section 2 below recommended (ACGIH TLV) or regulate C (OSHA PEL) limit. Where employees will not be exposed, keep level below 25% of LEL in Sect. 2.

PROTECTIVE GLOVES

Wear chemically resistant gloves.

EYE PROTECTION

Safety glasses with slide shields or goggles.

OTHER PROTECTIVE EQUIP.

Avoid skin contact by use of other protective clothing. A safety shower, an eye bath and washing facilities should be available.

10. SPECIAL PRECAUTIONSPRECAUTIONS TO BE TAKEN
IN HANDLING AND STORAGE

Keep container tightly closed. Keep away from heat, sparks and flame. Do not use with aluminum equipment at temperatures above 49 deg. C (120 deg. F).

OTHER PRECAUTIONS

Do not take internally. Prevent contact with contaminated clothing. Wash contaminated clothing before reuse.

NEITHER THIS DATA SHEET NOR ANY STATEMENT CONTAINED HEREIN GRANTS OR EXTENDS ANY LICENSE, EXPRESS OR IMPLIED, IN CONNECTION WITH PATENTS ISSUED OR PENDING WHICH MAY BE THE PROPERTY OF THE MANUFACTURER OR OTHERS. THE INFORMATION IN THIS DATA SHEET HAS BEEN ASSEMBLED BY THE MANUFACTURER BASED ON ITS OWN STUDIES AND ON THE WORK OF OTHERS. THE MANUFACTURER MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE ACCURACY, COMPLETENESS, OR ADEQUACY OF THE INFORMATION CONTAINED HEREIN. THE MANUFACTURER SHALL NOT BE LIABLE (REGARDLESS OF FAULT) TO THE VENDER, THE VENDER'S EMPLOYEES, OR ANYONE FOR ANY DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE ACCURACY, COMPLETENESS, ADEQUACY, OR FURNISHING OF SUCH INFORMATION.

TOWNSEND CHEMICAL DIVISION
P.O. BOX 991
MUNCIE, IN 47308



INVADE 90™

PREMIUM-LOW FOAM, NONIONIC SPREADER-ACTIVATOR

PRINCIPLE FUNCTIONING AGENTS: (BY WEIGHT)

Alkyl Aryl Polyoxyethylene Ether, Humectants and Other Functional Agents including Defoamer	90%
Constituents ineffective as a spray adjuvant	10%
TOTAL	100%

All ingredients are accepted for use under 40 CFR 180.

KEEP OUT OF REACH OF CHILDREN WARNING

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear when handling. Harmful if inhaled. Avoid breathing spray mist. **NOTE:** Read and follow all label directions and cautions on all products used.

FIRST AID

Call a poison control center or doctor immediately for treatment advice.

If Swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth to mouth if possible.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Have the product container with you when calling a poison control center or doctor, or going for treatment.

GENERAL INFORMATION

FOR USE WITH INDUSTRIAL, FORESTRY, UTILITY, ROADSIDE AND OTHER HERBICIDE PRODUCTS.

INVADE 90 is a highly concentrated low-foam, non-ionic spreader activator. **INVADE 90** increases the activity and effectiveness of agricultural insecticides, fungicides and herbicides by breaking down the waxy cuticle on the leaf surface and improves adhesion between the pesticide and the plant surface.

DIRECTIONS FOR USE

For use with insecticides, fungicides, miticides: Use 1/4 to 1/2 pint (4 to 8 fl. oz.) per 100 gallons of water.

For use with herbicides, defoliant, desiccants: Use 1/2 to 4 pints (8 to 64 fl. oz.) per 100 gallons of water. In difficult wetting situations (such as hard water or mature waxy foliage) the higher rates may be required.

Aquatic Use: **INVADE 90** is a member of an exclusive category in that it is labeled with EPA approved pesticides for application to ponds, lakes, and drainage ditches. It will enhance control of cattails, duckweed, lily pads, water lettuce and other floating weeds. The use of a surfactant is not recommended when treating submerged weeds. Follow manufacturer's label for additional information.

NOTE: The application rates on this label are based on pesticide labels which recommend, the use of a nonionic surfactant. Rates of this product may be increased or decreased. For optimum results, follow pesticide labeling for proper recommendations. Before using **INVADE 90**, where a non-ionic surfactant may not be recommended, the user or applicator advisor must have experience with the combination or must have conducted a phytoxicity trial.

TYPE OF APPLICATION

PER 100 GALLON

Agricultural and Turf	1/2 to 2 pints
Utility and Highway R.O.W.	1/2 to 4 pints
Forest Site Preparation	1 to 4 pints
Aquatic-Surface	1/2 to 4 pints
Aquatic-Submerges	1/2 to 4 pints

HANDLING AND STORAGE

For optimum storage stability, store at temperatures between 40°F (5°C) and 90°F (32°C). Keep away from heat, sparks, and flame. Do not use with aluminum equipment at temperatures above 120°F (49°C). Avoid contact with eyes and skin. Do not store near oxidizing agents.

CONTAINER DISPOSAL

Triple rinse. Then offer container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill. If incineration is allowed, stay out of smoke.

WARRANTY

Townsend warrants that this product, when used as directed, is reasonably fit for use as designated on this label. Townsend makes no warranty of fitness or merchantability. Townsend's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no event shall Townsend be liable for indirect or consequential damages. This warranty shall not be changed by oral or written agreement unless assigned by a duly authorized officer of Townsend.



Manufactured For:

TOWNSEND CHEMICAL DIVISION
SELMA, INDIANA 47383

TOWNSEND CHEMICAL DIVISION

Date: 03-12-96

MATERIAL SAFETY DATA

1. PRODUCT IDENTIFICATION

TRADEMARK:
SYNONYMS:
MOLECULAR FORMULA:

KNOK-IT 664
SILICONE ANTIFOAM

2. HAZARDOUS INGREDIENTS

None

3. PHYSICAL PROPERTIES

APPEARANCE AND ODOR: Milky Liquid
Mild
BOILING POINT: >200° F
SPECIFIC GRAVITY: 1.0(+/- .05)

VAPOR DENSITY (air=1): >1.0
% VOLATILE (by wgt.%): >85% as water
EVAPORATION RATE (ether=1): <1
SOLUBILITY IN WATER: Dispersible

4. FIRE AND EXPLOSION DATA

DOT CATEGORY: Not regulated
FLASH POINT: NA
OSHA CATEGORY: Combustible Liquid-Class III
EXTINGUISHING MEDIA: Use National fire protection association Class B extinguishers (Carbon dioxide, water fog, dry chemical or foam). Water may also be used.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None Known
SPECIAL FIRE FIGHTING PROCEDURES: Cool fire exposed containers with water. Wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

5. REACTIVITY DATA

STABILITY: () unstable (x) stable
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids and oxidizers.
DECOMPOSITION: Carbon and silicon oxides
HAZARDOUS POLYMERIZATION: () may occur (x) will not occur
CONDITIONS TO AVOID: None

6. WASTE DISPOSAL AND ENVIRONMENTAL RELEASES

ENVIRONMENTAL RELEASES: Certain releases of any substance to the environment are prohibited by law and may require reporting to an environmental agency. Remove all sources of ignition. Wear personal protective equipment to avoid breathing vapors. Use non-sparking tools. For small spills, dike and absorb with inert material. Use emergency response professionals if managing a release is beyond the capability of in-house personnel.

S P E C I M E N L A B E L



KNOK-IT 664

ANTI-FOAM / DEFOAMER

GENERAL INFORMATION

Knok-It 664 is an effective, easy to use, high strength defoaming agent. **Knok-It 664** can be used as a premix or added while a tank is being filled to control foam formation.

NOTE: The effective concentration of **Knok-It 664** depends directly on temperature, composition, viscosity, agitation and other various conditions; therefore rates may require adjustment for the most effective dosage.

CAUTION - Keep out of reach of children. **Stop** - before using this product obtain all related information and read directions for use, conditions of sale, limitations, liabilities and practical treatments.

PRECAUTIONARY STATEMENT - May cause irritation to skin and eyes. In case of contact, flush thoroughly with water. If swallowed, give several glasses of milk or water. **Do not induce vomiting.** Get immediate medical attention.

IN CASE OF CONTACT

If in Eyes: If applicable, remove contact lenses and flush with water for 15 minutes. Get medical attention immediately.

If Inhaled: Seek fresh air immediately. Give artificial respiration if needed. If breathing is difficult, see physician.

Ingestion: Give several glasses of milk or water. **Do not induce vomiting.** Get immediate medical attention.

If On Skin: Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops.

STORAGE AND DISPOSAL - Keep this container tightly closed and do not allow water to be introduced. Do not contaminate water sources or allow any runoff from contents of the container or spray equipment. Do not store near heat or open flame. Do not store with oxidizing agents.

CONTAINER DISPOSAL - Triple rinse container into the spray solutions and discard or offer for recycling or reconditioning. Always dispose of containers according to state and local guidelines.

Manufactured For: TOWNSEND CHEMICAL DIVISION SELMA, INDIANA 47383

DIRECTIONS FOR USE - Important
Use **Knok-It 664** at 1/2 - 3 ounces per 100 gallons of solution. It may be necessary to adjust the amount used according to individual conditions. In situations where foam develops after the fluid level drops, stop agitation and add the recommended dosage of **Knok-It 664**. When foaming develops in urea water solutions it may be necessary to use as much as 2 ounces of **Knok-It 664** per 100 gallons of solution.

ACTIVE INGREDIENTS:

Dimethylpolysiloxane 10%
Constituents ineffective as a spray adjuvant 90%
Total 100%

All ingredients are exempt from tolerance requirements under CFR 40, 180.1001.

WARRANTY - Townsend warrants that this product, when used as directed, is reasonably fit for use as designated on this label. Townsend makes no warranty of fitness or merchantability. Townsend's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no event shall Townsend be liable for indirect or consequential damages. This warranty shall not be changed by oral or written agreement unless signed by a duly authorized officer of Townsend.

TOWNSEND CHEMICAL
9211 E. JACKSON ST.
SELMA, IN 47383



DuPont Agricultural Products

M0000524

Revised 3-OCT-2006

Printed 4-JAN-2007

"DuPont" "DIREX" 4L HERBICIDE

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"DIREX" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

DIREX
DIURON

Tradenames and Synonyms (Remarks)

Inactive EPA Reg. No.: 1812-257 (Griffin)

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information	1-800-441-7515 (outside the U.S. 302-774-1000)
Transport Emergency	CHEMTREC 1-800-424-9300(outside U.S. 703-527-3887)
Medical Emergency	1-800-441-3637 (outside the U.S. 302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components Material

Components Material	CAS Number	%
*DIURON	330-54-1	40
3-[3,4-DICHLOROPHENYL]-1,1-DIMETHYLUREA		
*ETHYLENE GLYCOL	107-21-1	5
INERT INGREDIENTS		55

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

(Continued)

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Refer to the product label.

Personal Protective Equipment

MANUFACTURING, COMMERCIAL BLENDING, & PACKAGING WORKERS:

Respiratory Protection : In enclosed spaces where the TLV or PEL may be exceeded, wear NIOSH/MSHA approved dust or mist respirator.

Eye Protection : Wear protective eyewear to prevent contact with this substance.

PESTICIDE APPLICATORS AND WORKERS:

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

Pilots, flaggers and groundboom applicators must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Mixers, loaders, other applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- A NIOSH approved dust/mist filtering respirator with any N, R, P, or HE filter or with approval number prefix TC-21C.
- Chemical resistant apron when mixing, loading, or cleaning equipment or spills.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
 - Chemical-resistant gloves made of any waterproof material.
 - Shoes plus socks.
-

Exposure Guidelines

Applicable Exposure Limits

DIURON

PEL (OSHA)

None Established

TLV (ACGIH)

10 mg/m³, 8 Hr. TWA, A4

AEL * (DuPont)

1 mg/m³, 8 & 12 Hr. TWA, total dust

(Continued)

DISPOSAL CONSIDERATIONS(Continued)

sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Container Refilling and Disposal (For Containers up to 250 gal): Refer to the product label.

Container Disposal for Bulk Containers: Refer to the product label.

The container must only be refilled with this pesticide product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if the container is damaged or leaking. Disposal of the container must be in compliance with State and local regulations.

TRANSPORTATION INFORMATION**Shipping Information**

DOT/IMO/ICAO:

Proper Shipping Name : Not regulated.
NOTE: If a single package contains 100 or more pounds Diuron, classify as: Environmentally Hazardous Substance, Liquid, n.o.s., (Diuron)

Hazard Class : 9
UN/NA Number : 3082
Packaging Group : III
Marine Pollutant : No
Reportable Quantity : Yes (100 pounds) Insert letters RQ before or after basic description

REGULATORY INFORMATION**# U.S. Federal Regulations**

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : Yes
Fire : No
Reactivity : No

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-678

(Continued)

TOWNSEND CHEMICAL DIVISION

IN CASE OF EMERGENCY, CALL CHEMTREC
UNITED STATES: 1-800-424-9300
INTERNATIONAL: 1-202-483-7616

MATERIAL SAFETY DATA

1. PRODUCT IDENTIFICATION

TRADEMARK: AX-IT
SYNONYMS: Petroleum Distillate & Emulsifier
CHEMICAL FAMILY: Petroleum Hydrocarbon Oil

2. HAZARDOUS INGREDIENTS

OSHA REGULATED

COMPONENT	CAS. NO	WT%	EXPOSURE LIMITS
Severely Hydrotreated Light Paraffinic Oil Distillate	64741-77-1		No Specific Limit
Maximum of 1 ppm Ethylene Oxide (EO) (75-21-8) may be present in the product. The OSHA PEL and ACGIH TLV for EO is 1 ppm.			

3. EFFECTS OF OVEREXPOSURE:

Harmful or fatal if swallowed. Pulmonary aspiration hazard if swallowed and/or vomiting occurs - can enter lungs and cause damage. Excessive exposure may cause irritation to eyes, nose, and throat. No acute effects expected to twice exposure limit. Contact with skin is practically non-toxic if absorbed may result in mild irritation with prolonged or repeated contact.

4. EMERGENCY FIRST AID

SKIN CONTACT: In case of skin contact, wash affected areas of skin with soap and water.
EYE CONTACT: In case of eye contact, immediately irrigate with plenty of water. If irritation persists, seek medical assistance.
INGESTION: If swallowed DO NOT INDUCE VOMITING! DO NOT GIVE LIQUIDS! Obtain emergency medical attention. Small amounts which accidentally enter mouth should be rinsed out until taste of it is gone.

5. REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Excessive heat
POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID: None known
INCOMPATIBLE MATERIALS: Strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce carbon monoxide and asphyxiates.

6. PHYSICAL PROPERTIES

APPEARANCE: Dark Blue Liquid
ODOR: Little Odor
BOILING POINT: Not Available
MELTING POINT: Not Available
VAPOR PRESSURE: Not Available
SPECIFIC GRAVITY: 0.866
VAPOR DENSITY: Not Available
% VOLATILE (BY VOL): NIL
OCTANOL/H₂O: Not Available
PARTITION COEF: Not Applicable
pH: Not Applicable
SATURATION IN AIR (BY VOL): Not Applicable
EVAPORATION RATE: (Ethyl Ether=1) >1
SOLUBILITY IN WATER: Dispersible



DuPont™

Direx® 4L

herbicide

Diuron Liquid Flowable Herbicide

Active Ingredients	By Weight
Diuron: 3-[3,4-dichlorophenyl]-1,1-dimethylurea	40.0%
Inert Ingredients	60.0%
TOTAL	100.0%

*Contains 4.0 Pounds of Diuron Per Gallon

EPA Reg. No. 352-678

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution! Causes eye irritation. May irritate nose, throat and skin. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing.

PRECAUTIONARY STATEMENTS (con'td)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some of the materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

Pilots, flaggers and groundboom applicators must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Mixers, loaders, other applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- A NIOSH approved dust/mist filtering respirator with any N, R, P, or HE filter or with approval number prefix TC-21C.
- Chemical resistant apron when mixing, loading, or cleaning equipment or spills.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROL STATEMENT

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

Flaggers supporting aerial applications must use an enclosed cab that meets the definition in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning of equipment or disposing of equipment washwaters. Cover or incorporate spills.

GENERAL INFORMATION

DuPont™ DIREX® 4L herbicide should be used only in accordance with recommendations on this label, or in separate published recommendations.

DIREX® 4L is liquid flowable to be mixed with water and applied as a spray for selective control of weeds in certain crops and for nonselective weed control on non-cropland areas. It is non-corrosive to equipment, non-flammable and non-volatile.

DIREX® 4L may be applied to soil prior to emergence of weeds to control susceptible weed seedlings for an extended period of time. The degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soil low in clay or organic matter for equivalent herbicide performance. Moisture is required to activate the herbicide. Best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks of application.

DIREX® 4L applied before emergence of crop and weeds is an effective procedure because susceptible weeds are controlled in an early, vulnerable seedling stage before they compete with the crop. With favorable moisture conditions, DIREX® 4L continues to control weeds for some time as the crop becomes better able to compete. Should weed seedlings begin to break through the preemergence treatment in significant numbers, secondary weed control procedures should be implemented; these include cultivation and postemergence herbicide application.

DIREX® 4L may also be used to control emerged weeds. Results vary with rate applied and environmental conditions. Best results are obtained on succulent weeds growing under conditions of high humidity and temperature of 70°F or higher. Addition of a surfactant to the spray (where recommended) increases contact effects of DIREX® 4L.

DIREX® 4L may be used as a directed postemergence application. Contact of crop foliage and/or fruit with spray or mist must be avoided on the following crops: artichoke, corn (field), cotton, sorghum (grain), sugarcane and established plantings of apples, bananas, plantains, blueberries, caneberries, gooseberries, citrus, grapes, macadamia nuts, olives, papayas, peaches, pears, pecans, walnuts and certain tree plantings as injury may occur.

Under specified conditions (see RECOMMENDED USES), DIREX® 4L without surfactant may be applied over the top of alfalfa (established, dormant or semi-dormant), asparagus (established), birdsfoot trefoil (established, dormant), grass seed crops (established), oats, red clover (established, dormant), sugarcane, wheat and pineapple.

Weeds species vary in susceptibility to DIREX® 4L and they may be more difficult to control when under stress. Combinations of DIREX® 4L with other herbicides (as registered) increase the number of weed species controlled.

Consult labels of the companion product for this and other information. Observe all precautions and limitations on labeling of all products used in mixtures.

Since the effect of DIREX® 4L varies with soils, uniformity of application and environmental conditions, it is suggested that growers limit their first use to small areas.

IMPORTANT PRECAUTIONS

Do not use on home plantings of trees, shrubs or herbaceous plants or lawns, walks, driveways, tennis courts or similar areas.

Do not apply this product through any type of irrigation system.

Thoroughly clean all traces of DIREX® 4L from application equipment immediately after use. Flush tank, pumps, hoses and boom with several changes of water after removing nozzle tips and screens (clean parts separately).

Draining or flushing equipment on or near desirable trees or other plants or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots may injure these plants.

Trees or other desirable plants whose roots extend into a treated crop use area may be injured.

RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when

target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use of this product in certain portions of California, Oregon and Washington is subject to the January 22, 2004 Order for Injunctive Relief in Washington Toxics Coalition et al vs EPA, C01-132C (W.D. W.A.). For information, please refer to www.epa.gov/espp/wtc/.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

SELECTIVE USE IN CROPS

Preemergence Use (Germinating Weeds): DuPont™ DIREX® 4L, at recommended rates, controls annual weeds and grasses such as:

<u>0.6 to 0.8 Quarts/Acre</u>	<u>1.2 to 1.6 Quarts/Acre</u>	<u>1.6 to 4.8 Quarts/Acre</u>
Barnyardgrass (Watergrass)	Bluegrass, Annual	Ageratum
Crabgrass	Chickweed	Corn Speedwell
Lambsquarter	Corn Spurry	Dayflower
Pigweed	Dogfennel	Flora's Paintbrush
Purslane	Fiddleneck (Amsinckia)	Hawksbeard
Ragweed	Foxtail	Johnsongrass (Seedling)
	Gromwell	Kyllinger (Kyllinga)
	Grouncherry, Annual	Lovegrass, Annual
	Knawel	Marigold
	Morningglory, Annual	Mexican Clover
	Pennycress	Orchardgrass
	Rattail Fescue	Peppergrass
	Red Sprangletop	Pineappleweed
	Shepherdspurse	Pokeweed
	Tansymustard	Rabbit Tobacco
	Velvetgrass	Ricegrass
	Vernalgrass, Sweet, Annual	Ryegrass, Annual
	Wild Buckwheat	Sandbur
	Wild Lettuce	Smartweed, Annual
	Wild Mustard	Sowthistle, Annual
		Spanish Needles
		Velvetleaf (Buttonweed)
		Wild Radish

PARTIAL CONTROL

<u>0.8 Quarts/Acre</u>	<u>3.2 Quarts/Acre</u>	<u>6.4 to 8.0 Quarts/Acre</u>
Chickweed	Horsenettle	Guineagrass
Cocklebur	Quackgrass	Maidencane
Field Pennycress		Pangolagrass
Henbit		
Marestail		
Morningglory, annual		
Prickly sida (teaweed)		
Sesbania		
Shepherd's-purse		
Sicklepod		
Velvetleaf		
Waterhemp		

APPLICATION DIRECTIONS

AERIAL APPLICATION: For alfalfa, barley (winter), cotton (preplant or preemergence only), grass seed crops (PNW only), sugarcane and wheat (winter), application may be made by aircraft in a minimum of 3 gallons of water per acre. Avoid overlapping of spray swath and avoid application under conditions where excessive drift may occur. Where land is bedded, make application parallel to rows.

GROUND APPLICATION: Use a boom power sprayer properly calibrated to a constant speed and rate of delivery.

Openings in screens should be 50 mesh or larger. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means. If by-pass or return line is used, it should terminate at bottom of tank. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping or injury to crop may result.

PREEMERGENCE: For preemergence application, use sufficient spray volume and pressure to uniformly distribute the spray solution over treated soil. Preemergence weed control will be reduced on high organic matter soils such as peat or muck.

POSTEMERGENCE: For postemergence application, use sufficient spray volume and pressure for thorough coverage of weed foliage. For selective applications and applications near sensitive crops, use low spray pressure to keep spray drift to a minimum. DuPont™ DIREX® 4L at recommended rates controls seedling annual weeds such as annual morningglory, barnyardgrass (watergrass), crabgrass, crowfoot, goosegrass, pigweed and purslane. Addition of a surfactant to the spray (where recommended) increases contact effects of DIREX® 4L. Best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70° F or higher.

SPRAY PREPARATION: Mix proper amount of DIREX® 4L into necessary volume of water. Where use of a surfactant is recommended, dilute with 10 parts of water and add as last ingredient to nearly full spray tank.

TANK MIXTURES: DIREX® 4L may be tank mixed with other herbicides and/or adjuvants registered for crop or non-crop use in this label. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions.

REPLANTING

If initial seeding fails to produce a crop, any crop registered for the rate of DIREX® 4L that was applied may be replanted immediately. Thoroughly rework the soil before replanting. Do not retreat field with a second application as injury to the crop may result.

CROP ROTATION: Unless otherwise directed in a specific crop section of this label, do not rotate treated areas to any crop within 2 years after last application as injury to subsequent crop(s) may result.

For crops grown in the arid west and other arid areas: Reductions in normal irrigation practices for the crop in production or a summer fallow period without supplemental irrigation may require the crop rotation intervals to be extended (see specific Crop Recommended Use sections for crop-specific rotation intervals or refer to the Crop Rotation section above).

When such conditions occur, a field bioassay should be completed prior to planting any desired crop. A successful bioassay means growing to maturity a test strip of the crop(s) intended for production. The test crop(s) strip should cross the entire field including knolls, low areas and areas where any berms were located. The results of this bioassay may require the rotation intervals to be extended.

RATES: All rates of DIREX® 4L are expressed as broadcast rates. Where band applications are specified use proportionately less. For example, use 1/3 of the broadcast rate when treating a 14 inch band where row spacing is 42 inches. Where a range of dosages is given, use the lower rate on coarse textured soils low in clay or organic matter and the higher rate on fine textured soils high in clay or organic matter. For postemergence application, use the lower rate on smaller weeds and the higher rate on the larger weeds.

SOIL LIMITATIONS: Crop injury may result from failure to observe the following:

Unless otherwise directed, do not use on sand, loamy sand, gravelly soils or exposed subsoils; nor on pecans where organic matter is less than 0.5%; nor on alfalfa, apples, artichoke, barley (winter), citrus, corn, cotton, grapes, oats, olives, papayas, peaches, pears, sorghum, sugarcane, walnuts, and winter wheat where organic matter is less than 1%, nor on blueberries, birdsfoot trefoil, caneberries, gooseberries, macadamia nuts and peppermint where organic matter is less than 2%.

FIELD CROPS (See Soil Limitations): A good seedbed must be prepared before preemergence use of DIREX® 4L, as crop injury may result if application is made to ground which is cloddy or compacted resulting in improperly planted seed. Plant seed to depth specified. Unless otherwise directed, the surface of the soil should not be cultivated or disturbed after application of DIREX® 4L and before emergence of the crop as weed control may be reduced and crop injury may result. However, if moisture is insufficient to activate the herbicide, a shallow cultivation (rotary hoe preferred) should be made after emergence of crops while weeds are small enough to be controlled by mechanical means.

FRUIT AND NUT CROPS (See Soil Limitations): Unless otherwise directed, make single application per year as a directed spray, avoiding contact of foliage and fruit with spray or drift. Do not graze livestock in treated orchards or groves.

RECOMMENDED USES

ALFALFA

Treat only vigorous, healthy stands of alfalfa that have been established for at least one full growing season. Do not apply to seedling alfalfa nor to alfalfa/grass mixtures. Do not apply to alfalfa under stress from disease, insect damage, shallow root penetration (such as on shallow hard pans), alkali spots, nor to flooded fields as crop injury may result. Do not spray on snow-covered or frozen ground. In alfalfa, DIREX® 4L may only be applied once per year. Do not exceed 2.4 quarts per acre pre year.

**ARIZONA, CALIFORNIA, IDAHO, NEVADA,
OREGON, WASHINGTON**

APPLICATION INFORMATION

Severe alfalfa injury may result following application after cutting if either the regrowth is more than 2 inches high, significant stubble is left after alfalfa cutting or grazing, or the air temperature is above 90 degrees F.

For best results, apply before weeds have emerged or become established (2 inches in height or diameter). Control of established weeds is improved by applying DuPont™ DIREX® 4L with a suitable contact herbicide (except Non-Dormant varieties). Sufficient rainfall or irrigation is needed for soil activation of DIREX® 4L.

Treated areas may be replanted to any crop after 1 year from last application if the rate does not exceed 1.6 quarts per acre.

NON-DORMANT AND SEMI-DORMANT VARIETIES

Make a single application of 1.2 to 2.4 quarts per acre during the winter months when alfalfa plants are in the least active stage of growth.

DORMANT VARIETIES

Make a single application of 1.2 to 2.4 quarts per acre after alfalfa becomes dormant and before new growth exceeds 2 inches in height in the spring. Where weeds have emerged, include a surfactant or use a tank mixture with the recommended rate of paraquat.

EASTERN COLORADO, KANSAS: For control of tansymustard, apply 0.8 quarts per acre shortly after emergence of mustard in the fall or winter. Use 1.6 quarts per acre if weeds are 2 to 4 inches in height. Alternatively, if other annual weeds are present, apply 1.6 to 2.4 quarts per acre in February or March.

OTHER AREAS WHERE ALFALFA BECOMES WINTER DORMANT: Use 1.2 to 2.4 quarts per acre (1.2 to 1.6 quarts per acre East of Appalachian Mountains). Apply in March or early April, but before spring growth begins.

APPLE

Use DIREX® 4L only under trees established in the orchard for at least 1 year. Do not treat varieties grafted on full-dwarf root stocks. Apply 3.2 quarts per acre in the spring from March through May. In the Far West, apply 3.2 quarts per acre to small weeds less than 2 inches in height or diameter under dormant trees. Alternatively, treatments to small weeds may be applied at 1.6 quarts per acre post-harvest followed by 1.6 quarts per acre prior to bud break.

Do not apply more than 3.2 quarts per acre per year. When using DIREX® 4L in a sequential treatment program, allow a minimum of 90 days between applications. Do not make more than two applications of DIREX® 4L per year.

GEORGIA: Apply 1.6 to 2.4 quarts per acre in the spring. Repeat application in the fall but do not use more than 3.2 quarts per acre per year. Add a surfactant to improve control of small, emerged weeds.

DIREX® 4L PLUS DUPONT™ SINBAR®: Use only under trees established in the orchard for at least 2 years. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth.

Soil Texture	RATE/ACRE					
	1 to 2 % Organic Matter			More Than 2% Organic Matter		
	DIREX® 4L		SINBAR®	DIREX® 4L		SINBAR®
	Pints	Pounds	Pints	Pounds	Pounds	
Sandy loam	1.6	+	1.0	2.4	+	1.5
Loam, Silt loam, Silt	2.4	+	1.5	3.2	+	2.0
Clay loam, Clay	3.2	+	2.0	3.2	+	2.0

Where crop is grown under furrow irrigation or under raised-berm flood irrigation (trees 4 to 6 inches above waterline), apply only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows, nor trees grown under flat flood or basin irrigation, as injury to trees may result. Where complete weed control to harvest is desired, additional weed control measures may be required during the growing season.

**ARTICHOKE
(CALIFORNIA)**

Apply 1.6 to 3.2 quarts per acre in late fall or early winter after the last cultivation. Apply before weeds germinate or to emerging seedlings. Direct spray to cover the area between the rows and at the base of artichoke plants, keeping contact with crop plants at a minimum.

ASPARAGUS

Apply as a band or broadcast treatment. Do not apply to young plants during the first growing season (except as noted below), nor to newly seeded asparagus, nor on plants with exposed roots, as severe injury may result. Preemergence weed control will be reduced on soils with greater than 5% organic matter.

ESTABLISHED PLANTINGS: On light soils and other soils low in clay or organic matter, apply 0.8 to 1.6 quarts per acre. On soils high in clay or organic matter, use 1.6 to 3.2 quarts per acre. Two applications may be used. The first application should be made before weeds become established but no earlier than 4 weeks before spear emergence and no later than the early cutting period. If weeds are controlled into the cutting period by cultural practices, application may be delayed until immediately after the last cultivation. A second application may be made immediately following completion of harvest provided rainfall is expected. When two applications are used in one season, do not exceed 2.4 quarts per acre per application. In Washington (irrigated crop), apply a single treatment of 3.2 quarts per acre. If treatment is delayed until late winter or early spring, incorporation of the chemical in the top 1 to 2 inches of soil may substitute for lack of rain to activate the herbicide.

NEWLY PLANTED CROWNS

SAN JOAQUIN DELTA, CALIFORNIA: Make a single treatment of 1.6 to 3.2 quarts per acre on soils high in clay or organic matter. Use the lower rate on clay loams and the higher rate on peat soils. Do not use on soils containing less than 2% organic matter. Soil must be settled by rainfall or irrigation prior to treatment. Do not treat crowns planted to a depth of less than 2 inches.

BANANA AND PLANTAIN

NEW PLANTINGS: To control annual weeds, apply 1.2 to 2.4 quarts per acre after planting but before weed or crop emergence. Do not apply to loose soil directly over the planting material.

ESTABLISHED PLANTINGS: For control of annuals and for top-kill of perennials such as bermudagrass, birdseed grass and guineagrass, apply 2.4 to 4.8 quarts per acre plus surfactant. Avoid contact of banana and plantain plants with spray or drift as injury may result. When tall, dense weed growth is present, remove weed growth before application. If application is made to soil free of weeds, omit surfactant from the spray mixture. Repeat treatment as needed. Apply at 6 week intervals or longer for a maximum of 9.6 quarts DuPont™ DIREX® 4L per acre (broadcast basis) in 12 months.

Do not replant treated area to any crop within 2 years after last application as injury to subsequent crops may result. Exception: sugarcane or pineapple may be planted after 1 year.

BARLEY (WINTER)

WESTERN OREGON AND WESTERN

WASHINGTON: For drill planted barley, make a single application of 1.2 to 1.6 quarts per acre as soon as possible after planting but before emergence of barley.

Do not replant treated areas to any crop within 1 year after last application as injury to subsequent crops may result.

BERMUDAGRASS PASTURES (NEWLY SPRIGGED)

Apply 0.8 to 2.4 quarts after planting and before emergence of bermudagrass or weeds. Alternatively, for control of emerged annual weeds up to 4 inches in height, apply 0.4 to 0.8 quarts per acre; add a surfactant per 25 gallons of spray. If bermudagrass has emerged at time of treatment, temporary burn of exposed plant parts may occur. Plant sprigs (stolons) 2 inches deep in a well prepared seedbed. Do not treat areas where sprigs are planted less than 2 inches deep as crop injury may result. Do not graze or feed foliage from treated areas to livestock within 70 days after application.

BIRDSFOOT TREFOIL (LOTUS)

WESTERN OREGON: Treat only stands established for at least 1 year. Do not apply to seedling trefoil as injury may result. Make a single application of 1.6 quarts per acre when trefoil is dormant (October 15 to December 15).

Do not replant treated areas to any crop within 1 year after last application as injury to subsequent crops may result.

BLUEBERRY, CANEBERRY, GOOSEBERRY

Use only in fields which have been established for at least 1 year. Do not apply to berries interplanted with fruit trees. Do not apply to plants whose roots are exposed as injury may result. Apply as a band treatment at base of canes or bushes. For spring application, apply before germination and growth of annual weeds.

AR, FL, GA, MS, MO, NH, NC, SC

BLUEBERRY: Apply 1.2 to 1.6 quarts per acre in the spring and repeat treatment after harvest in the fall. Add a surfactant to improve control of small, emerged weeds.

CALIFORNIA

BLACKBERRY, BOYSENBERRY, DEWBERRY, LOGANBERRY, RASPBERRY: For control of winter annual weeds, apply 1.6 quarts per acre in October or November. Repeat at the same rate in late spring to control summer annuals. A single application of 2.4 quarts per acre in January or February will control annual weeds in some areas, but the separate fall and spring schedule is preferred.

INDIANA, MICHIGAN, OHIO

BLUEBERRY: Apply 1.6 to 3.2 quarts per acre in late spring. Alternatively, apply 1.6 quarts per acre in the fall and repeat at the same rate in the spring.

RASPBERRY: Apply 2.4 quarts per acre in late spring.

MAINE, MASSACHUSETTS

BLUEBERRY: Apply 1.6 quarts per acre in late spring.

MARYLAND, NEW JERSEY

BLUEBERRY: For control of winter annual weeds, apply 1.6 quarts per acre from October to December, or make a single application of 2.0 quarts per acre in early to mid-spring.

WESTERN OREGON, WESTERN WASHINGTON

BLUEBERRY, CANEBERRY, GOOSEBERRY: For control of winter annual weeds, apply 1.6 quarts per acre in October or November. Repeat at the same rate in late spring to control summer annual weeds. A single application of 2.4 quarts per acre in January or February will control both winter and summer annual weeds in some areas, but the separate fall and spring schedule is preferred.

CITRUS

Time application as indicated for specific areas. However, application may be made any time of the year where sprinkler or flood irrigation can be timed to activate the herbicide. Established perennial weeds require other special control procedures.

DuPont™ DIREX® 4L may be applied in citrus in combination with registered paraquat and glyphosate formulations. Read and follow specific label instructions, precautions, and restrictions on the label of the tankmix partner when applying DIREX® 4L in combination with other products.

NOTE: For citrus trees 4 or less years of age, make a maximum of 2 applications per year. When DIREX® 4L is used in a sequential treatment program, allow a minimum of 60 days between applications.

For citrus trees 4 or more years of age, make a maximum of 2 applications per year. When DIREX® 4L is used in a sequential treatment program, allow a minimum of 80 days between applications.

ARIZONA (EXCEPT YUMA AREA) AND CALIFORNIA (EXCEPT IMPERIAL AND COACHELLA VALLEYS): Apply 2.4 to 3.2 quarts per acre shortly after grove has been laid-up in final form (non-tillage program) in late fall or early winter. Alternatively, apply 1.6 quarts per acre in October or November and repeat at the same rate in March or April. Subsequent annual applications of 1.6 to 2.4 quarts per acre will usually give adequate weed control.

FLORIDA: Use only as a band application. Do not use "Trunk to Trunk".

EAST COAST/FLATWOODS AREAS (LOW PERMEABLE SOILS)

Apply from 1.6 quarts per acre to a maximum of 6.4 quarts per acre for control of annual broadleaf weeds and annual grasses. Addition of an approved surfactant will improve control of emerged weeds.

Do not use more than 6.4 quarts per treated acre in any one application.

Do not apply more than 6.4 quarts per treated acre per year. This amount corresponds to 6.4 pounds of diuron, the active ingredient in DIREX® 4L.

The maximum allowable use rate for diuron is 6.4 pounds per treated acre per year inclusive of all diuron formulations used within 1 year.

RIDGE AREAS - EXCEPT HIGHLAND COUNTY (HIGHLY PERMEABLE SOILS)

Apply from 1.6 quarts per acre to a maximum of 3.2 quarts per acre for control of annual broadleaf weeds and annual grasses. Addition of an approved surfactant will improve control of emerged weeds.

Do not use more than 3.2 quarts per treated acre in any one application.

Do not apply more than 6.4 quarts per treated acre per year. This amount corresponds to 6.4 pounds of diuron, the active ingredient in DIREX® 4L.

The maximum allowable use rate for diuron is 6.4 pounds per treated acre per year inclusive of all diuron formulations used within 1 year.

RIDGE AREAS - HIGHLAND COUNTY (HIGHLY PERMEABLE SOILS)

Apply from 1.6 quarts per acre to a maximum of 3.2 quarts per acre for control of annual broadleaf weeds and annual grasses. Addition of an approved surfactant will improve control of emerged weeds.

Do not use more than 3.2 quarts per treated acre in any one application.

Do not apply more than 4.8 quarts per treated acre per year. This amount corresponds to 4.8 pounds of diuron, the active ingredient in DIREX® 4L.

The maximum allowable use rate for diuron is 4.8 pounds per treated acre per year inclusive of all diuron formulations used within 1 year.

Do not use at less than 60 day intervals.

PUERTO RICO: Make a single application of 3.2 to 6.4 quarts per acre or apply 2.4 to 3.2 quarts per acre followed by the same rate 4 to 6 months later. On bearing citrus, apply any time when seasonal rains are expected. On non-bearing trees, apply when winter banks are pulled down.

TEXAS: Apply 1.6 to 3.2 quarts per acre for annual weeds. Use 3.2 to 4.8 quarts per acre for control of seedling johnsongrass. Spring treatments give best results. Well established weeds should be eliminated by cultivation prior to treatment.

CORN (FIELD)

EAST OF ROCKY MOUNTAINS

POSTEMERGENCE: Make a single application of 0.6 quarts per acre in combination with non-pressure nitrogen solution, such as, 28% or 32% nitrogen fertilizer. If nitrogen solution is not used, apply 0.8 quarts per acre with surfactant. Apply as a directed spray when corn is at least 20 inches high and weeds are no taller than 3 inches

DO NOT APPLY OVER TOP OF CORN.

Do not replant to any crop within 1 year after last application as injury to subsequent crops may result. Exceptions: cotton, corn, and grain sorghum may be planted the spring following treatment.

PREPLANT BURNDOWN / PREEMERGENCE

APPLICATION: DIREX® 4L may be applied from fall through spring prior to planting corn (preplant burndown) or may be applied any time prior to corn emergence following planting (preemergence). Preplant burndown and preemergence applications of DIREX® 4L should be made at rates of 0.5 to 0.8 quarts product per acre as a broadcast application. The degree and duration of herbicidal efficacy from DIREX® 4L will vary with the amount of chemical

applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter will require higher dosages than soil low in clay or organic matter for equivalent herbicide performance. If a greater length of residual activity is desired, DuPont™ DIREX® 4L may be applied as a broadcast preplant burndown at rates up to 1.6 quarts product per acre. Moisture following application is required to activate the herbicide. Best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks after application. Plant corn at least 1.5 inches deep and make sure that the seed slot is closed.

DIREX® 4L may also be tank mixed with other herbicides labeled for use in preplant burndown and/or preemergence application in corn. If weeds are emerged at the time of application apply DIREX® 4L or DIREX® 4L plus any tank mix partner with an adjuvant. If tank mixed with other herbicides please read and follow all product labels for use rates, adjuvant recommendations, and any application restrictions associated with any tank mix partner.

Do not replant treated areas to crops other than corn or cotton within 8 months following either a band or broadcast treatment of DIREX® 4L as injury to subsequent crops may result. Always consult the tank mix partner(s) label to determine any additional rotation or plant back restrictions.

Note: Do not apply more than a total of 1.6 quarts of DIREX® 4L per treated acre per year from all application timings.

Do not apply DIREX® 4L to frozen ground.

COTTON

USE PRECAUTIONS

Do not spray over the top of cotton plants.

Do not use DIREX® 4L in preplant or preemergence applications where soil-applied organophosphate insecticides are used due to potential for severe cotton injury and possible stand loss.

Seedling disease may weaken plants and increase the possibility of injury from the use of trifluralin products followed by DIREX® 4L. These treatments should be used only in conjunction with a standard fungicide seed treatment plus a good supplemental soil fungicide program such as captan-PCNB mixture.

When tank mixing DIREX® 4L with glyphosate, use at least 10 gallons per acre spray volume and add a compatibility agent.

Do not apply to sand or loamy sand soils.

Do not use on soils with less than 1% organic matter as crop injury may result.

Do not allow livestock to graze treated cotton.

When using DIREX® 4L in a sequential treatment program, allow a minimum of 21 days between applications.

Do not make more than 3 applications of DIREX® 4L per year.

During a single crop season, do not exceed the following amount of DIREX® 4L per acre: 0.8 quarts on sandy loam, 1.5 quarts on clay loam, and 2.2 quarts on clay.

PREPLANT - U.S. (Except AZ and CA)

DIREX® 4L may be used for burndown of existing annual weeds and residual control of weeds prior to planting cotton. Complete any planned tillage prior to application. Apply herbicide treatments before weeds germinate or before weed seedlings are more than 2 inches tall. If weeds are emerged prior to application, the addition of a non-ionic surfactant is recommended. Tillage following application should be avoided to prevent incorporation of the herbicide into the cotton seed germination zone which may result in crop injury. Dragging treated soil from beds will concentrate the herbicide in middles and reduce residual weed control on the beds.

Apply DIREX® 4L at 0.8 to 1.6 quarts per acre from 15 to 150 days prior to anticipated planting. Refer to the table below for use rates in preplant applications. Do not exceed suggested use rates for individual soil textures shown in the table below. If less than the maximum rate of application for a given soil is applied preplant, subsequent preplant or preemergence applications of DIREX® 4L may be made. However, the total combined application rate for DIREX® 4L applied preplant and preemergence may not exceed the maximum suggested use rate for either application method. Early preplant applications may require additional weed control before planting.

DIREX® 4L ALONE:

Soil Texture	Rate (quarts per acre)
Sandy loam, Loam, Silt loam, Silt	0.8
Sandy clay loam, Clay loam, Silty clay loam, Sandy clay	1.0
Silty clay, Clay	1.6

Preemergence application of herbicides with a similar mode of action to that of diuron following preplant application of DIREX® 4L may result in cotton injury. When preplant applications of DIREX® 4L are followed by preemergence applications of herbicides with a similar mode of action, e.g., products containing fluometuron, the product containing fluometuron should be used at the minimum rate of application for the soil under consideration in order to reduce potential for crop injury. This is most critical where applications of DIREX® 4L are made less than 30 days preplant, on coarse textured soils, and on soils low in organic matter. The risk of injury from preplant applications of DIREX® 4L is reduced where substantial rainfall (> 0.5") occurs between application and planting.

Read and follow any additional precautions on the DuPont™ DIREX® 4L label when using this product for preplant weed control in cotton.

PREPLANT - Arizona and California

Use DIREX® 4L alone or apply as a separate operation following preplant broadcast treatment with trifluralin products (incorporated according to directions on the trifluralin product label). Apply DIREX® 4L as a broadcast spray after beds are formed, pre-irrigated and final seedbeds prepared. Prior to planting, drag-off the tops of the beds and plant in moist soil not treated with DIREX® 4L. Treated soil is returned to the bed after planting when irrigation furrows are reformed after cotton has emerged. If more than two furrowing-out operations are performed prior to lay-by, or deep furrows are made early, weed control may be reduced in the furrow bottoms.

DIREX® 4L ALONE: Apply at 0.8 to 1.6 quarts per acre.

DIREX® 4L FOLLOWING TRIFLURALIN PRODUCTS:

Soil Texture	RATE (quarts per acre)	
	trifluralin products	DIREX® 4L
Sandy loam, Loam, Silt loam, Silt	0.5	0.5 to 0.8
Sandy clay loam, Clay loam, Silty clay loam, Sandy clay, Clay	0.75	0.8 to 1.0

PREPLANT TANK MIXES: When emerged weeds taller than 2 inches or weeds not listed on the DIREX® 4L label are present, DIREX® 4L may be tank mixed with other products registered for preplant applications in cotton. The addition of dry spray grade ammonium sulfate at the rate of 2.0% w/w (17 pounds per 100 gallons finished spray solution) is suggested to enhance performance of DIREX® 4L plus glyphosate tank mixes.

PREEMERGENCE - U.S. (Except AZ and CA)

Use DIREX® 4L alone or apply as a separate operation following preplant treatment with trifluralin products. Apply DIREX® 4L after planting but before cotton emerges. Do not treat cotton in deep furrows as crop injury may result. Use only where cotton is planted on flat or raised seedbeds. Shallow incorporation (no deeper than 0.25 inch) with a rotary hoe or similar equipment following planting usually improves results, especially during dry weather. A wide press wheel should be used on the planter to provide a level seedbed for subsequent early season postemergence treatments. If moisture is insufficient to activate DIREX® 4L or if soil becomes crusted before crop emerges, a shallow rotary hoeing (no deeper than 0.25 inch) should be made before weeds become established.

If less than the maximum rate of application for a given soil is applied preplant, subsequent preplant or preemergence applications of DIREX® 4L may be made. However, the total amount of DIREX® 4L applied preplant and preemergence must not exceed the maximum suggested use rate for either preplant or preemergence applications.

DIREX® 4L ALONE: Make a single application as a broadcast or band spray, using the following broadcast rates. Use proportionately less for band treatment.

SOIL TEXTURE	RATE (quarts per acre)
Sandy loam, Loam, Silt loam, Silt	0.8
Sandy clay loam, Clay loam, Silty clay loam, Sandy clay	1.0
Silty clay, Clay	1.6

PREEMERGENCE APPLICATIONS OF DIREX® 4L FOLLOWING TRIFLURALIN PRODUCTS: Apply trifluralin products prior to planting as a broadcast or band treatment. Incorporate according to the directions on the trifluralin label. As a separate operation apply DIREX® 4L after planting, but before cotton emerges. Use the following broadcast rates. For band treatment, use proportionately less.

Soil Texture	RATE (quarts per acre)	
	trifluralin products	DuPont™ DIREX® 4L
Sandy loam, Loam, Silt loam, Silt	0.5	0.8
Sandy clay loam, Clay loam, Silty clay loam, Sandy clay, Clay, Silty clay	0.75	1.0 to 1.6

POSTEMERGENCE

Apply DIREX® 4L only as a directed spray to cover weed foliage. Adjust nozzles to minimize contact of cotton leaves with spray or drift or crop injury may result. Applications may also be made in hooded/shielded sprayers.

Early Season

Apply when cotton is at least 6 inches tall and when weeds are not actively growing and do not exceed 2 inches in height. Apply as a band or broadcast treatment at the following rate. Two applications may be made if needed.

ANNUAL WEED PROBLEM

(UP TO 2 INCHES TALL)	RATE
Cotton 6 - 8 inches	0.4 quarts per acre
Cotton 8 - 12 inches	0.6 quarts per acre

For control of seedling perennial grass such as johnsongrass in directed sprays and partial control of nutsedge or when weed growth is under drought stress or over 2 inches in height, add 2.0 to 3.5 pounds active DSMA or 1.65 to 2.0 pounds active MSMA to above spray mixture. If DSMA or MSMA are used, do not apply after first bloom.

For enhanced weed control in hooded/shielded sprayer applications add MSMA or DSMA as suggested above; or add registered paraquat or glyphosate formulations according to label recommendations. Consult product labels for specific recommendations and precautions for hooded sprayer applications.

Late Season (Lay-by)

Apply 0.8 to 1.2 quarts per acre (0.8 to 1.6 quarts per acre in Arizona and California) when cotton is at least 12 inches high (at least 20 inches for Pima S-2). For control of germinating weed seedlings, apply to soil beneath cotton plants and between rows immediately after last cultivation. In irrigated cotton, best weed control is obtained if the field is irrigated within 3 to 4 days after application, to thoroughly wet the surface of the ground over the row to carry the herbicide into the root zone of germinating weeds. Alternatively, for control of emerged annual weeds (4 inches or less in height) at lay-by time, make a single application in combination with surfactant, or use 0.4 to 0.6 quarts per acre plus surfactant and repeat later if needed.

REPLANTING

If initial seeding fails to produce a stand, cotton or corn may be replanted in soil treated preplant or preemergence with DuPont™ DIREX® 4L alone or following preplant application of trifluralin products. Wherever possible, avoid disturbing original bed. If necessary to rework soil before replanting, use shallow cultivation such as discing. Do not relist nor move soil into the original drill area. Plant seed at least 1 inch deep. Do not retreat field with a second preplant or preemergence application of herbicide during the same crop year as injury to crop may result.

CROP ROTATION

DIREX® 4L HERBICIDE

Type of Application	That May Follow Treated Cotton
Band pre or postemergence	Any crop 4 months after last application
Band pre plus postemergence or Broadcast preemergence (and preplant) or Broadcast preemergence plus band postemergence	Cotton, soybeans, corn or grain sorghums (not sorghos or forage sorghums nor grass sorghums) the next spring. Do not replant treated areas to any other crop within 1 year after last application as injury to subsequent crops may result.
Broadcast postemergence (lay-by)	Cotton, corn, grain sorghums (not sorghos or forage sorghums nor grass sorghums) the next spring. Do not replant treated areas to any other crop within 1 year after last application as injury to subsequent crops may result.

For subsequent crops in fields where trifluralin products are used, follow instructions on the trifluralin product label.

FILBERTS (EXCEPT CA)

DIREX® 4L is recommended for control of certain weeds in filbert orchards established for at least one year.

Do not apply more than 3.2 quarts per acre per year. When using DIREX® 4L in a sequential treatment program, allow a minimum of 150 days between applications.

Apply DIREX® 4L as a directed spray, avoiding contact on the foliage and fruit with spray or drift. Make an initial treatment of 2.2 quarts per acre in the late fall or early winter after harvest. Repeat annually with 2.2 quarts per

acre, or apply 1.6 quarts per acre in October or November after harvest and repeat at the same rate in March or April.

Do not apply when nuts are on the ground.

Do not graze livestock in treated orchards.

Do not use on light sandy soils.

If trees are planted on hillsides, the elimination of weeds and ground cover may cause excessive soil erosion. Under these conditions strip applications of DIREX® 4L (at proportionately lower rates) may be made near the trees or to the tree rows perpendicular to the slope.

GRAPE

Apply only as a band treatment to established vineyards at least 3 years old. On soils low in clay or organic matter (1 to 2%), severe plant injury may result if heavy rainfall or more than 1 inch of irrigation occurs soon after treatment. This risk must be assumed by the user.

Do not apply more than 4 quarts per acre as a single maximum use rate. Do not apply more than 8 quarts per acre per year. When using DIREX® 4L in a sequential treatment program, allow a minimum of 90 days between applications. Apply a maximum of two applications per year.

Avoid direct or indirect spray contact to foliage and green bark (non-barked vines, with the exception of undesirable suckers).

NEW YORK AND PENNSYLVANIA

(PERENNIAL GRASSES): Use only in established vineyards (at least 4 years old) for spot control of perennial grasses such as orchard-grass, quackgrass and ryegrass. Apply in the spring as a band treatment to ridged soil (2 to 4 inches high) under trellis at the rate of 6.4 to 8 quarts per acre. Band width should not exceed 30 inches. Do not apply more than once every 4 years. Use only on heavy soil types such as loams, silt loams, clay loams. Do not use in areas where grape roots are shallow or exposed because of high bedrock, poor drainage or erosion, as injury to grapevines may result.

EAST OF THE ROCKY MOUNTAINS: On soils low in clay or organic matter (1 to 2%), apply 1.6 to 2.4 quarts per acre. On soils high in clay or organic matter, apply 2.4 to 4.8 quarts per acre. Apply in the spring just prior to germination of annual weeds.

WEST OF THE ROCKY MOUNTAINS: For best results, apply during the winter months when weeds are less than 2 inches in height or diameter. Rainfall or overhead sprinkler irrigation sufficient to wet the soil to a depth of 2 inches is necessary to activate the herbicide. Abnormally heavy rainfall following application just before spring growth may move the herbicide into the root zone of grapes which could result in injury. For initial treatment, apply 2.4 to 3.2 quarts per acre. Subsequent annual applications of 1.6 quarts per acre will usually give adequate weed control. Do not apply to vines with trunks less than 1.5 inches in diameter as injury may result.

GRASS SEED CROPS

PERENNIAL EXCEPT WHERE SPECIFICALLY INDICATED

Except as noted, apply only to established plantings at least 1 year old.

NOTE: Apply a single application per year at up to 2.4 quarts per acre. May be applied by aerial application in the Pacific Northwest only.

COLORADO, KANSAS, NEW MEXICO,

OKLAHOMA: On sand bluestem, side oats grama and switchgrass, apply 1.6 to 2.4 quarts per acre during the dormant period shortly before weed seedlings emerge. Do not apply after crop begins growth in the spring as crop injury may result. In fields where ash residues have accumulated from burning straw use 2.4 quarts per acre. Spread unburned chaff or straw with a harrow or chopper before application.

EASTERN OREGON, EASTERN

WASHINGTON: On perennial bluegrass and fescue apply 0.8 to 2.4 quarts per acre as broadcast in enough diluent to get even distribution. Apply in spring before rapid growth of the crop begins and when the windgrass is still small (1-4 leaf). DO NOT use on coarse (sand) textured soils.

WESTERN OREGON/WESTERN

WASHINGTON: On alta fescue, Astoria bentgrass, Highland bentgrass, Kentucky bluegrass (Merion bluegrass) and orchardgrass apply 1.6 to 2.4 quarts per acre between October 1 and November 15. In fields where ash residues have accumulated from burning straw, use 2.4 quarts per acre. Spread unburned chaff or straw with a harrow or chopper before application. For best results apply as soon as possible after fall rains start. Established weeds beyond two to four leaf stage should be removed prior to treatment.

Well established vigorous stands of spring planted alta fescue, Kentucky bluegrass and orchardgrass may be treated the following fall provided the crop is planted before April 1 and treatment is not applied before October 15; apply 1.6 quarts per acre.

OREGON, WASHINGTON: Apply in the fall to perennial ryegrass at the rate of 0.8 to 1.6 quarts per acre and to tall fescue at the rate of 1.6 to 2.4 quarts per acre. Use a sufficient volume of water, a minimum of 25 gallons per acre, for thorough coverage of weed foliage. For best results, make applications at the onset of the fall rains and before weeds have become established (typically October 1 through November 15). Established weeds beyond the 2-4 leaf stage should be removed prior to treatment.

Apply only to well established, vigorous stands. Do not apply to perennial ryegrass stands less than 1 year old. Use mechanical agitation and avoid overlap of spray patterns. Weed control efficacy may be reduced in fields where ash residues have accumulated from burning straw.

ANNUAL RYEGRASS FOR THE CREATION OF

ROWS: Apply 0.8 to 1.6 quarts per acre as a directed or shielded spray so the intended crop row area is not treated. These applications should be made where excessive populations of annual ryegrass are anticipated to volunteer from previous crops. Applications can be made as a directed/shielded spray during seeding or after emergence of annual ryegrass. These applications generally will occur between October 1 and January 15. DuPont™ DIREX® 4L is most effective when applied before annual ryegrass volunteer plants have been more than 2 leaves. If larger plants are to be treated, addition of a labeled postemergence herbicide, will provide more effective control.

Adjust nozzle heights and spacing to allow the establishment of the desired row width (generally about 3 inches) and spacing (generally 9 to 12 inches). Use of low pressure nozzles, shielded nozzles, or drop nozzles to reduce spray movement into the intended crop row area is recommended.

FINE FESCUE GRASS SEED CROPS (INCLUDING CHEWINGS, CREEPING RED AND HARD FESCUE TYPES): For the suppression of rattail fescue, apply at 0.8 to 1.6 quarts per acre on soils having at least 1% organic matter. Do not use on sand, loamy sand, gravelly soils or exposed subsoils.

APPLICATION INFORMATION: DIREX® 4L is recommended for use on healthy, vigorous stands of fine fescue. DIREX® 4L can be applied to stands established at least 1 year or to new plantings that have been established for at least 6 months and have a minimum of eight tillers at time of application.

Apply in fall before grass weeds are beyond the one to two leaf stage and before broadleaf weeds are larger than 1 to 2 inches tall or across. Use the high end of the rate range for large weeds or where weed populations are high.

Approximately 1/2 to 1 inch of rainfall or sprinkler irrigation is needed to move DIREX® 4L into the weed zone before weeds develop an established root system. Weeds larger than the size indicated or those having a well established root system before DIREX® 4L is properly activated by rainfall/irrigation may not be adequately controlled.

Weed control may be reduced by heavy straw residues or ash from field burning.

TANK MIXTURES: DIREX® 4L can be applied either alone or in a program involving tank mixes with other herbicides and adjuvants. When using a tank mix with other herbicides, use 0.8 to 1.2 quarts per acre unless prior experience indicates it is safe to use higher rates. Tank mixes with other herbicides can increase the risk of crop injury. When using a certain tank mix for the first time, limit use to a small area to determine safety before treating large areas.

USE PRECAUTIONS

Do not replant treated areas to any crop within 2 years of last application as injury to subsequent crops may result.

Do not apply to snow covered or frozen ground as injury to the crop or poor weed control may result.

Do not treat stands lacking in vigor due to poor fertility, environmental stress, insect or disease, or damage from other herbicides.

NEW PLANTINGS

OREGON, WASHINGTON: For use in newly planted bentgrass, chewing fescue, Kentucky bluegrass, perennial ryegrass, orchardgrass and tall fescue. During planting operation, spray a suitable brand of activated charcoal as a 1 inch band on soil surface at 15 pounds per acre of crop where row spacing is 20 inches (300 pounds per acre broadcast basis). Mount nozzles to apply directly over seed rows to prevent crop injury. Follow with DuPont™ DIREX® 4L as a single broadcast spray at the rate of 2.0 to 2.4 quarts per acre. Apply as soon as possible after planting but before crops or weeds emerge and before rains or sprinkler irrigation. Fall or spring plantings may be treated. Best results usually occur with early fall plantings. Treatment will not control downy brome or wild oats.

MACADAMIA NUT

HAWAII: Use only under trees established in the orchard for at least 1 year. Apply 1.6 to 4.8 quarts per acre immediately after harvest, preferably before weeds emerge. If weeds have emerged, add surfactant. Retreat as needed but do not exceed 8.0 quarts per acre per year.

OATS

Do not replant treated areas to any crop within 1 year after last application as injury to subsequent crops may result.

SPRING OATS - DRILL PLANTED

IDAHO, EASTERN OREGON, EASTERN

WASHINGTON: Use in areas where average annual rainfall exceeds 16 inches. Make a single application of 0.8 to 1.2 quarts per acre after planting, either before or after oats emerge but within 6 weeks of planting. Best results are usually obtained when application is made 3 to 4 weeks after planting. Apply before weeds are 3 to 4 inches in height.

WINTER OATS - DRILL PLANTED

MIXED WITH PEAS OR VETCH - WESTERN

OREGON, WESTERN WASHINGTON: Make a single application of 1.2 to 1.6 quarts per acre as soon as possible after planting but before crop emergence.

OLIVE

(CALIFORNIA)

Use only under trees established in the grove for at least 1 year. Apply 1.6 quarts per acre after the grove has been laid-up in final form in late October or November. Repeat

at same rate in March or April. Remove weed growth prior to treatment.

PAPAYA

For trees established in the orchard for at least 1 year. Apply 2 to 4 quarts per acre, preferably before weeds emerge. If weeds have emerged, add surfactant.

For papaya trees less than one year old, apply 2 to 4 quarts per acre of DIREX® 4L as a post-plant treatment between the rows. Use only in orchards that are lined with mulch paper in the crop row. Treat up to mulch paper only.

Apply preemergence or early postemergence in sufficient spray volume to provide uniform coverage of the weeds and/or soil and to allow proper dispersion and suspension of the product in the spray tank.

Do not apply more than 4 quarts per acre per year.

Do not allow spray to contact papaya foliage or other desirable vegetation.

Do not graze livestock in treated areas.

PEAS

(AUSTRIAN FIELD)

WESTERN OREGON: DIREX® 4L is recommended for selective control of certain weeds in Austrian field peas.

Apply 1.2 to 1.6 quarts DIREX® 4L per acre as a broadcast spray with air or ground equipment as soon as possible after planting but before crop emerges for control of weeds such as chickweed, shepherdspurse, wild mustard, fiddleneck, lambsquarters, pigweed and annual bluegrass. Use lower rate on coarse-textured soils and higher rate on fine-textured soils.

Do not use DIREX® 4L on sand, sandy loam, gravelly soils or exposed subsoils or on soils having less than 1% organic matter as crop injury may result. Do not replant treated area to another crop within one year of application. Crop injury may result if severe winter stress, disease or insect damage to the crop follows application.

PEACH

Use only under trees established in the orchard for at least 3 years. Apply 1.6 to 2.2 quarts per acre in the early spring before weeds emerge or during the early seedling stage of weed growth. In California, apply 1.6 to 3.0 quarts per acre.

For peaches grown East of the Rocky Mountains, do not apply within 20 days of harvest.

In the Far West, do not apply within 8 months of harvest.

Where crop is grown under furrow irrigation or under raised-berm flood irrigation (trees 4 to 6 inches above water line), apply only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows, nor trees grown under flat flood or basin irrigation, as injury to trees may result. Where complete weed control to harvest is desired, additional weed control measures may be required during the growing season.

GEORGIA: On trees established for at least 2 years, apply 1.6 to 2.2 quarts per acre in the spring. Repeat application in the fall but do not exceed 4.0 quarts per acre per year. Add surfactant to improve control of small, emerged weeds.

DUPONT™ DIREX® 4L PLUS DUPONT™

SINBAR®: Use only under trees established in the orchard for at least 2 years. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth.

RATE / ACRE

Soil Texture	1 to 2 % Organic Matter		More Than 2% Organic Matter	
	DIREX® 4L Quarts	SINBAR® Pounds	DIREX® 4L Quarts	SINBAR® Pounds
Sandy loam	0.8 +	1.0	1.2 +	1.5
Loam, Silt loam, Silt	1.2 +	1.5	1.6 +	2.0
Clay loam, Clay	1.6 +	2.0	1.6 +	2.0

PEAR

Use only under trees established in the orchard for at least 1 year. Do not treat varieties grafted on full-dwarf root stocks. Apply 3.2 quarts per acre in the spring from March through May. In the Far West, apply 3.2 quarts per acre to weeds less than 2 inches in height or diameter under dormant trees. Alternatively, apply to small weeds at 1.6 quarts per acre postharvest followed by 1.6 quarts per acre prior to budbreak.

PECAN

Make a single band or broadcast application as a directed spray using a minimum of 30 gallons of water per acre. Apply in the spring before weeds emerge or during the early seedling stage of growth.

DIREX® 4L plus SINBAR®

RATE / ACRE

Soil Texture	Tank mix **		
	DIREX® 4L Alone* Quarts	DIREX® 4L + SINBAR® Quarts Pounds	
Sandy loam	1.6	1.2 +	1.5
Loam, Silt loam, Silt	2.4	1.4 +	1.75
Clay loam, Clay	3.2	1.6 +	2.0

* Use only under trees established in the grove for at least 3 years, and on soils with at least 0.5% organic matter.

**Use only under trees established in the grove for at least 1 year, and on soils with at least 1% organic matter.

NOTE: Do not use on eroded areas where subsoil or roots are exposed, nor on trees that are diseased or lacking in vigor or on trees planted in irrigation furrows as injury may occur.

PEPPERMINT

WASHINGTON, OREGON, IDAHO

Apply DIREX® 4L at 0.6 to 0.8 quarts per acre on soils having 1.0% to 2.0% organic matter.

Apply DIREX® 4L at 0.8 to 1.6 quarts per acre on soils having 2.1 to 3.0% organic matter.

Apply DIREX® 4L at 1.6 to 2.4 quarts per acre on soils having more than 3.0% organic matter.

USE PRECAUTIONS

Do not apply to stands of mint suffering from stress due to low fertility, drought, winter injury, insects, disease or damage from other herbicides or other causes.

Do not apply to snow covered or frozen ground as injury to the crop or poor weed control may result.

Do not apply to sand, loamy sand, gravelly soils or exposed subsoils. Do not apply to soils that have a high salt content and/or high water table or poor drainage that retards mint root development resulting in a shallow root system. Do not apply to soils having less than 1% organic matter.

APPLICATION TIMING: Apply DIREX® 4L to established (at least one year) stands of mint during the late winter dormant period or after flaming in the spring prior to the emergence of new growth. Do not cultivate after application.

If weeds are present at time of application, the use of a surfactant at 0.25% volume/volume or crop oil concentrate at 1.0% volume/volume may be used to increase the performance of DIREX® 4L postemergence to weeds.

TANK MIXES AND SEQUENTIAL TREATMENTS: DIREX® 4L can be applied either alone or in a program involving tank mixes and/or sequential treatments with other herbicides and adjuvants providing DIREX® 4L is not applied to actively growing mint plant.

When using a tank mix with other herbicides, use the lower end of the DIREX® 4L use rate range unless prior experience indicates it is safe to use higher rates. Tank mixes and sequential treatments with other herbicides can increase the risk of crop injury. When using a certain tank mix or sequential treatment for the first time, limit use to a small area to determine safety before treating large areas.

PINEAPPLE

HAWAII: Apply 1.6 to 4.8 quarts per acre as a broadcast spray just before or immediately after planting but prior to weed emergence. Use 1.6 to 3.2 quarts per acre after harvesting the plant crop or ratoon crop (for first ratoon crop as well as subsequent ratoon crops) but before differentiation. For plant crop only, additional broadcast or interspace applications may be made prior to differentiation at the rate of 1.6 quarts per acre at intervals of not less than 2 months. Additional applications to plant crop may be made as needed to interspace only using 1.6 quarts per acre. Do not apply more than 9.6 quarts per acre nor more than 12.8 quarts total per acre per plant crop. Treated areas may

be planted to pineapple or sugarcane 1 year after last application.

FLORIDA: Apply 3.2 to 5.0 quarts per acre as a broadcast spray just before or immediately after planting but prior to weed emergence. For ratoon crop use 3.2 quarts per acre after harvesting plant crop. For plant crop only, a second and third broadcast or interspace application may be made prior to differentiation at the rate of 1.6 quarts per acre at intervals of not less than 2 months. Additional applications to plant crop may be made as needed to interspace only using 1.6 quarts per acre. Do not apply more than three broadcast sprays (maximum 9.6 quarts per acre) prior to differentiation nor more than 12.8 quarts total per acre per plant crop. Treated areas may be planted to pineapple or sugarcane 1 year after last application.

PUERTO RICO: Apply 3.0 to 5.0 quarts per acre as a broadcast spray before or immediately after planting but prior to weed emergence. Preemergence application controls weeds such as pigweed, crotalaria, morningglory, purslane, crabgrass, foxtail, goosegrass, fall panicum and sourgrass.

RED CLOVER

WESTERN OREGON: Make a single application of 1.6 quarts per acre on established red clover stands at least 9 months old. Apply when red clover is dormant between October 15 and December 15. Do not apply to seedling red clover. Do not replant treated area to any crop within 1 year after last application as injury to subsequent crops may result.

Treatment will control annual weeds such as bluegrass, chickweed, hawksbeard, rattail fescue, ryegrass and velvetgrass.

SORGHUM

(GRAIN)

SOUTHWESTERN STATES: Apply 0.2 to 0.4 quart per acre plus surfactant. Apply as a directed postemergence spray after sorghum is 15 inches tall to control weeds 2 to 4 inches in height. Use lower rate on broadleaf weeds up to 2 inches tall. Use the higher rate on grasses up to 2 inches and broadleaf weeds up to 4 inches tall. When the lower rate is used, a second application may be made if needed. Do not exceed 0.4 quart per acre. Treatment of weeds under drought stress is usually ineffective.

Do not replant treated areas to crops other than cotton or corn within 4 months following band treatment and 6 months following broadcast treatment as injury to subsequent crops may result.

DO NOT SPRAY OVER THE TOP OF SORGHUM.

SUGARCANE

To prevent possible crop injury on new cane varieties, test tolerance to DuPont™ DIREX® 4L prior to adoption as a field practice. Do not treat sugarcane growing on thinly covered sub-soils or rocky areas as crop injury may result.

Temporary chlorosis and stunting of the crop may result from application over emerged cane. Application over emerged cane should be made only as directed below, without the addition of a surfactant or crop oil concentrate. To minimize chlorosis and stunting, use directed postemergence sprays.

DIREX® 4L may be applied as a directed spray (including hooded and shielded spray) in combination with paraquat. Consult the label of the tank mix partner for rates and timings of application, restrictions, and precautions.

PREEMERGENCE - FLORIDA: For high organic soils, apply 1.6 to 3.2 quarts per acre as a broadcast or band spray prior to weed emergence after planting or after harvesting plant crop (for ratoon crop).

POSTEMERGENCE - FLORIDA: Make one or two applications of 1.6 quarts per acre as needed by directed spray inter-row. Alternatively, for panicum control, make up to three applications of 0.4 to 0.8 quarts per acre plus surfactant as a directed spray after cane has emerged but before panicum exceeds 2 inches in height. Adjust nozzles to spray beneath cane plants and between rows to cover weed foliage and to minimize contact of cane leaves with spray or drift. Do not apply more than 4.8 quarts total per acre between planting (or ratooning) and harvest.

HAWAII: Apply 1.6 to 4.8 quarts per acre as a broadcast spray prior to weed emergence after planting or after harvesting plant crop or ratoon crop. Sequential applications of 1.6 to 3 quarts per acre may be made as a broadcast spray over emerged cane or by directed spray inter-row.

If weeds are emerged, add a surfactant to spray mixture and apply as a directed spray.


Do not apply more than three treatments nor more than 9.6 quarts per acre in Hawaii between planting (or ratooning) and harvest. Treated areas may be replanted to sugarcane or pineapple 1 year after last application.

PUERTO RICO: Apply 3.2 to 5.0 quarts per acre as a broadcast spray prior to weed emergence after planting or after harvesting plant crop or ratoon crop. A second and third application of 1.6 to 3.2 quarts per acre may be made as a broadcast spray over emerged cane or by directed spray inter-row.

If weeds are emerged, add a surfactant and apply as a directed spray.

Do not apply more than three treatments nor more than 8 quarts per acre in Puerto Rico between planting (or ratooning) and harvest. Treated areas may be replanted to sugarcane or pineapple 1 year after last application.

LOUISIANA, TEXAS: Apply at 2.4 - 3.0 quarts per acre. DIREX® 4L may be applied as a broadcast spray after planting and following the harvesting of sugarcane. DIREX® 4L may also be applied broadcast in late winter. Application is best when made prior to weed emergence.




DuPont™ DIREX® 4L may be applied as a post-directed spray immediately after the last cultivation. Direct the spray application to the base (no more than 1/3 the plant height) of the sugarcane plants. When small weeds (3 inches or less) are present at application, add a surfactant at 0.25% V/V or crop oil concentrate at 1.0% V/V to the spray mix.

USE PRECAUTIONS

Temporary leaf yellowing may occur following application. Do not apply more than 6 quarts per acre broadcast per year. Use proportionately less for band applications.

TREE PLANTINGS

CO, MT, NE, ND, SD, WY: Use only under established plantings 1 year or older of American elm, caragana, cottonwood, Douglas fir, green ash, honeysuckle, Ponderosa pine, red cedar, Russian olive and Siberian elm. Use 2.0 to 4.0 quarts per acre. Apply as a band 4 feet wide in the tree row (2 feet on each side of row). For example, 1.6 ounces DIREX® 4L treats 135 feet of tree row (2 feet on each side of row) at the rate of 4.0 quarts per acre. Apply as a directed spray in early spring before weeds emerge and before trees leaf out. Do not apply to foliage of trees, nor under trees growing in low areas as injury may result.




IDAHO, OREGON, WASHINGTON: DIREX® 4L is recommended for control of weeds to aid in the establishment of hybrid poplar plantings. Apply at 0.8 to 2.4 quarts per acre depending upon soil texture and organic matter content. Use 0.8 to 1.6 quarts per acre on coarse textured soils and 1.6 to 2.4 quarts per acre on medium to fine textured soils. Do not use on gravelly soils or on any soil having less than 0.5% organic matter as injury to trees may result. **Injury may result from applications to poplar plantings grown on sandy soil with low organic matter with sprinkler irrigation.** When applied in a band, the application rate will be in proportion to the area banded on a per acre basis.

Apply in late winter or early spring as a uniform broadcast spray before or after planting but prior to bud swell, or as a directed spray after bud swell. Apply before weeds emerge or after emergence while weeds are small. Some rainfall or water is necessary to move DIREX® 4L into the weed root zone before weeds become well established. If weeds are present at time of treatment, add a surfactant at 1 to 2 quarts per 100 gallons of spray solution.

PRE-PLANT: Take precautions to prevent treated soil (usually top 1 inch) from coming into contact with roots of trees during the planting process as injury may result.

POST-PLANT (BROADCAST): It is best to wait until rain or irrigation has settled the soil around the newly planted trees before applying DIREX® 4L. If trees are dormant, a broadcast application can be made.



POST-PLANT (DIRECTED): If buds have started to swell, use a directed spray pattern that prevents DIREX® 4L from contact with trees as injury may result. During the growing season (from bud swell to leaf drop) DIREX® 4L

may be applied (alone or with tank mix) between tree rows in shielded and directed sprays.

DIREX® 4L can be tank mixed with a registered glyphosate herbicide pre-plant and as a directed spray to broaden the spectrum of weeds controlled and improve post-emergence activity. Use 0.8 to 2.4 quarts DIREX® 4L plus glyphosate herbicide (according to label recommendations) depending upon soil type and weeds to be controlled. Note: There are several formulations of glyphosate herbicide. Check the glyphosate herbicide label to verify that the intended use as a pre-plant or post-directed spray on hybrid poplar plantations is allowed. Avoid contact of glyphosate herbicide with foliage, green stems, trees or other desirable vegetation because severe damage or destruction may result.

WALNUT

(ENGLISH)

CALIFORNIA, OREGON, WASHINGTON

Use only under trees established in orchards for at least 1 year. As an initial treatment, apply 2.2 quarts per acre after the orchard has been laid-up in final form (non-tillage program) in late fall or early winter. Retreat annually with 1.6 to 2.2 quarts per acre. In California apply 1.6 to 3.0 quarts per acre. Alternatively, apply 1.6 quarts per acre in October or November and repeat at the same rate in March or April.

Do not use on sand, loamy sand, gravelly soils or exposed sub-soils, nor where organic matter is less than 1%. Do not graze livestock in treated orchards and groves.

Do not make more than two applications per year. Do not apply more than 3.2 quarts per acre per year. In California do not apply more than 3.0 quarts per acre per year. When using DIREX® 4L in a sequential treatment program, allow a minimum of 150 days between applications.

WHEAT

(WINTER)

USE PRECAUTIONS

Crop injury may result where severe winter stress, disease or insect damage follows application. Winter-sensitive varieties may be less tolerant of DIREX® 4L than winter-hardy varieties. Crop injury may result from failure to observe the following: Do not use on sand or loamy sand soils, nor on gravelly or sandy loams with less than 1% organic matter. Do not use on thinly covered or exposed sub-soil area (clay knolls). Do not treat wheat planted less than 1 inch deep. Do not treat wheat where winter climatic conditions have caused "heaving" of plants. Do not treat wheat plants lacking in vigor due to poor emergence, insect damage, disease, high alkalinity or other causes. Do not apply after wheat has reached the "boot" stage of maturity. Unless specified otherwise, do not use with surfactants or nitrogen solution. Do not replant treated areas to any other crop within 1 year after last treatment (except as noted) as injury to subsequent crops may result.

IDAHO, OREGON, WASHINGTON

EAST OF CASCADE RANGE: Where average annual rainfall exceeds 16 inches, make a single application of 0.8 to 1.2 quarts per acre.

FALL TREATMENT

For early fall planted wheat (seeded before September 10), apply 3 to 6 weeks after planting but before weeds are 3 to 4 inches tall. Treatment after October 1 has generally given best results. Application should not be made after soil freezes in the fall. Wheat planted in late October should not be treated until the following spring.

SPRING TREATMENT

Apply as soon as wheat starts to grow. Treatment made prior to April 10 will usually give good results, provided weed growth is less than 4 inches tall. Application later than May 1 may give poor results.

Alternatively, make a single application of 0.4 to 0.8 quart DuPont™ DIREX® 4L plus 0.25 pound bromoxynil per acre as a tank mixture, in either the fall after wheat has emerged but before soil freezes or in the spring as soon as soil thaws. Apply before weeds are more than 2 inches tall or across.

Where average annual rainfall is 10 to 16 inches following fall planting, make a single application of 0.8 to 1.2 quarts per acre when sufficient moisture is available to germinate wheat seed. Apply before soil freezes and weeds are 2 inches tall. Application later than March 1 may give poor results.

If fall-planted wheat fails to grow due to winter kill or adverse growing conditions after fall treatment, only fields treated before November 1 may be replanted to spring wheat. Spring wheat should not be planted before April 1 and only after deep discing and plowing to a depth of 4 to 6 inches prior to planting. Do not make a second application during the same crop year or injury to the crop may result.

OREGON, WASHINGTON

WEST OF CASCADE RANGE: Make a single application of 1.2 to 1.6 quarts per acre as soon as possible after planting. If wheat and weeds have emerged, apply before weeds are 3 to 4 inches tall. Alternatively, apply a tank mixture of DIREX® 4L plus bromoxynil as detailed above for "East of Cascade Range".

OTHER AREAS OF OREGON AND WASHINGTON:

Make a single application in the spring as soon as wheat (fall-planted) starts to grow and before weeds are 2 inches tall. Application later than May 1 may give poor results.

KANSAS, OKLAHOMA, TEXAS: Do not use on sand or sandy loam soils. Use 0.8 quart per acre on silt and silt loam soils and 1.2 to 1.6 quarts per acre on clay, clay loam and silty clay loam soils.

CENTRAL PLAINS, MIDWEST: Use 0.8 to 1.6 quarts per acre.

NORTHEAST: Use 0.8 to 1.2 quarts per acre.

NON-AGRICULTURAL USES

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Non-crop weed control is not within the scope of the Worker Protection Standard.

Keep unprotected persons out of treated areas until sprays have dried.

NON-CROP WEED CONTROL

DIREX® 4L is an effective herbicide for the control of listed weeds. The degree of control and duration of effect will vary with amount of chemical applied, soil texture, rainfall and other conditions. DIREX® 4L may be used as a preemergence treatment at any time of the year except when ground is frozen, provided adequate moisture is supplied by rainfall or artificial means to activate the herbicide. Best results are obtained if applied shortly before weed growth begins. If dense growth is present, remove tops and spray the ground.

Increased contact activity on established weeds may be obtained by the addition of a non-ionic surfactant. Apply as a drenching spray to actively growing weeds during warm weather when daily temperature will exceed 70° F.

Use a fixed-boom power sprayer properly calibrated to insure a constant rate of application. Mix proper amount of DIREX® 4L into volume of water necessary to obtain uniform coverage. If a surfactant is used, dilute with ten parts of water and add as last ingredient to nearly full tank. DIREX® 4L must be kept in suspension at all times.

Agitate by mechanical or hydraulic means in the spray tank. If bypass or return line is used, it should terminate at bottom of tank to minimize foaming. Use 50 mesh screen or larger.

NOTE: DIREX® 4L may be applied by either aerial or ground application equipment for weed control in rights-of-way sites.

Do not exceed an application rate of 2 gallons per acre except in areas of high rainfall (more than 40 inches/year) or dense vegetation (more than 90% weed ground cover). In areas with high rainfall or dense vegetation, a maximum application of 3 gallons per acre is allowed. Do not exceed 3 gallons per acre per year. Do not make more than two applications per year. If DIREX® 4L is used in a sequential application program, allow a minimum of 90 days between applications.

GENERAL WEED CONTROL

DIREX® 4L is recommended for general weed control as follows: uncultivated non-agricultural areas (such as,

airports, highway, railroad and utility rights-of-way, sewage disposal areas); uncultivated agricultural areas (non-crop producing, which includes: farmyards, fuel storage areas, fence rows, barrier strips); industrial sites (outdoor, such as, lumberyards, pipeline and tank farms).

DuPont™ DIREX® 4L may be applied in non-crop sites that contain areas of temporary surface water caused by the collection of water in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded as well as seasonally dry flood deltas. Do not make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.

Apply 4 to 12 quarts per acre to control most annual weeds including:

BROADLEAVES

4 - 12 QUARTS/ACRE

Ageratum
Chickweed
Cocklebur
Corn Speedwell
Corn Spurry
Dayflower
Dogfennel
Fiddleneck (Amsinckia)
Flora's Paintbrush
Gromwell
Groundcherry, Annual
Hawksbeard
Horsenettle
Knawel
Lambsquarter
Marigold
Mexican Clover
Morningglory, Annual
Pennycress
Pigweed
Pineappleweed
Pokeweed
Prickly Lettuce
Prickly Sida (Teaweed)
Purslane
Rabbit Tobacco
Ragweed
Sesbania
Shepherdspurse
Sicklepod
Smartweed, Annual
Sowthistle, Annual
Spanish Needles
Tansymustard
Velvetleaf (Buttonweed)
Wild Buckwheat
Wild Lettuce
Wild Mustard
Wild Radish

GRASSES

4 - 6.4 QUARTS/ACRE

Barnyardgrass (Watergrass)
Bluegrass, Annual
Crabgrass
Foxtail
Johnsongrass (Seedling)
Kyllinger (Kyllinga)
Lovegrass, Annual
Orchardgrass
Peppergrass
Quackgrass
Rattail Fescue
Red Sprangletop
Ricegrass
Ryegrass, Annual
Sandbur
Velvetgrass
Vernalgrass,
Sweet, Annual

6.4 - 12 QUARTS/ACRE

Guineagrass
Maidencane
Pangolagrass

IRRIGATION AND DRAINAGE DITCHES: Apply 4

to 12 quarts per acre to control most annual weeds as shown above. Apply only when water is not in the ditch. For irrigation ditches, apply during the non-crop season and when the ditch is not in use. To avoid crop injury, it is essential to minimize movement of DIREX® 4L in irrigation water. The herbicide must be fixed in the soil by moisture. Apply before expected seasonal rainfall, if possible when soil in the ditch is still moist. Following treatment, if rainfall has not totaled at least 4 inches, fill ditch with water and allow to stand for 72 hours. Drain off any waste water remaining before using ditch. Trees or other desirable plants whose roots extend into the ditch area may be injured.

ADDITIONAL USE INFORMATION

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See **Wind, Temperature and Humidity**, and **Surface Temperature Inversions** sections of this label.

CONTROLLING DROPLET SIZE - GENERAL TECHNIQUES

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

CONTROLLING DROPLET SIZE - AIRCRAFT

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH AND HEIGHT

- **Boom Length (aircraft)** - The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- **Boom Height (aircraft)** - Application more than 10 ft above the canopy increases the potential for spray drift.
- **Boom Height (ground)** Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.**

NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are

characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (eg., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (eg., when wind is blowing away from the sensitive areas).

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store product in original container only. Store in a cool, dry place.

Pesticide Disposal: Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. **For Fiber Sacks:** Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities. **For Fiber Drums With Liners:** Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner. **For Paper and Plastic Bags:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Container Refilling and Disposal (For Containers up to 250 gal): This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than DuPont™ DIREX® 4L. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Container Disposal for Bulk Containers: When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-441-3637. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

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It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

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Internet address: <http://cropprotection.dupont.com/>

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