Sutan+•: Use in a preplant incorporated tank mixture for control of all weeds claimed on both the Princep and Sutan+ labels including partial control (suppression) of shattercane (wild cane). Fluid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of mixture with fertilizer before use. Refer to the General Information section of this label for a compatibility test procedure. Use a minimum of 20 gals. of spray volume per acre. Refer to the Sutan+ label for incorporation directions. Use the higher rate of Princep on fine-textured soil and where heavy broadleaf infestations are expected. For partial control (suppression) of shattercane, broadcast and incorporate immediately before planting 1.25-2.5 lbs. of Princep 80W plus 7.33 pts. of Sutan+ 6.7E per acre. For control of the other weeds claimed on both labels, broadcast and incorporate 1.25-3.75 lbs. of Princep 80W plus 4.75 pts. of Sutan+ 6.7E per acre. Observe all precautions and limitations on the Princep 80W and Sutan+ labels.

Sugarcane . Schwart (rightered) ----

Apply 2.5-5 lbs. per acre at planting cr<u>bafter harvest</u> if ratoon crop is to be grown, but before weeds or sugarcane emerge. Princep 80W may also be applied interline-directed or over the sugarcane to provide continuing control of germinating weeds.

Precautions: 1) Do not apply more than one 2.5-5 lb. application over the plants or more than two-interline directed applications. 2) Do not apply after "close-in." 3) Total application should not exceed 12.5 lbs. per acre crop cycle.

Note: Do not feed or graze treated forage to livestock.

Grasses Grown for Seed (Pacific Northwest Only)

Perennial ryegrass, Highland or Astoria bentgrasses, orchardgrass, Wall fescue, and fine fescues such as Illahee, Rainier, Pennlawn, ChewYngs, and related species. For the control of broadleaf weeds and annual grasses including annual ryegrass, rattail fescue, silver hairgrass, and downy brome (cheat), apply 2.5 lbs. Princep 80W in a minimum of 15 gals. of water per acre as soon as fall rains start. Early application is important.



Precaution: Apply only to grasses from which at least one seed crop has been cut.

Note: Allow 30 days between last application and grazing of dairy and beef cattle and sheep, and allow 60 days between the last application and cutting for hay.

Nurseries, Christmas Tree Plantings, Shelterbelts

Nurseries (see list below)

N Wiery L

Apply 2.5-3.75 lbs. in at least 25 gals. of water per acre in fall or spring at least one year after transplanting.

Christmas Tree Plantings and Shelterbelts (see list below)

Remove weed growth before application. Apply 2.5-5 lbs. in at least 25 gals. of water per acre after transplanting. Use the same rate for annual maintenance applications.

For quackgrass control apply 5 lbs. per acre in the fall or apply a split application of 2.5 lbs. per acre in the fall plus 2.5 lbs. per acre in early spring, after quackgrass begins growth.

Precautions: 1) Do not use Princip 80W on seedbeds or cutting beds. 2) In CA, OR, and WA, do not apply to Christmas trees or shelterbelts sooner than one year after transplanting. In other areas, do not apply to Christmas trees or shelterbelt transplants less than three years of age. 3) Do not apply more than once a year, except as directed for quackgrass control. Apply Princep 80W to these species of trees and shrubs, as recommended above:

/ Conifers Varborvitae (W, S) (P(.,)) (NS.) Austrian pine(NS.) (Ship) (Play) \v**#**Bishop pine % knobcone pine (*'s) Monterey pine (shore pine) Monterey pine
VMugho pine(N) VNorway spruce shis (2.5)(N) vted spruce(N)(IL,>)(IL,>) Wyhite spruce(N) *N*þálsam fir *Houglas* fir Veraser firlsh, sXNXIL, >) white fir (N)(p(.s.))Viemlock (M,s)(N)(f(.s.))Vjuniper(M,s), (N), (f(.s.))Vred cedar white cedar(M,SXP)(Sh,s)Vyew (Taxus spp. (Sh.S)(N)

Deciduous Trees and Woody Ornamentals American $elm(\mathcal{N})$ Viberian elm.h. Moxelder (Sh. S. (N) Voush honeysuckle NI) (5) Vcaragana (Sh.) vcotoneaster(*/N) $M_{ogwood}(N)$ veucalyptus(~) Wolly (Ilex spp.)(N) (..... (max. 4 lbs./A) Vhoney locust $\mathcal{M}(\mathcal{S}, \mathcal{N})$ VOregon grape (Mahonia spp.(N)vred oak(Sh, s)(/) WRussian Olive (51.5), (N) Wpalm (2.5 lbs./A) \mathcal{N}) bottle brush(A') V=carob(MS)(Mn.)

*For California only

Surflan Tank Mix: On Christmas tree plantings, use this tank mix for preemergence control of weeds listed on the Surflan 75W (or Surflan A.S.) and Princep 80W labels. Use on field grown conifer species listed on the labels for each herbicide plus grand fir, alpine fir, Engelmann spruce, black spruce, Colorado blue spruce, Coulter pine, giant redwood, and Veitchi fir. Broadcast the mixture as a directed spray to the soil surface or as an overtop spray using 2.5-5 lbs. of Princep 80W and 2.67-5.33 lbs. of Surflan 75W (or 2-4 qts. of Surflan A.S.). Apply in sufficient water per acre to uniformly treat the area. Follow overtop sprays with sprinkler irrigation to move the herbicide from leaf surfaces to the soil. Remove weed growth before application. Mix weed residues, prunings or trash into the soil, or remove them before treatment. Soil should be in good tilth and free of clods at time of application. Shallow cultivation (1-2 inches) after treatment will not reduce weed control. Observe all precautions and limitations on the Princep 80W and Surflan labels.

-28-

Dual[®] 8E Tank Mix: On field and liner grown woody ornamentals, use this tank mix for preemergence control of yellow nutsedge, barnyardgrass, crowfootgrass, fall panicum, giant foxtail, green foxtail, yellow foxtail, goosegrass, large crabgrass, smooth crabgrass, redroot pigweed, galinsoga, Venice mallow, lambsquarters, purslane, ragweed, smartweed and other weeds listed on the Dual 8E alone label. Control should last about 60 days. Apply 1-1.25 lbs. of Princep 80W plus 2-3 pts. of Dual 8E in a minimum of 15 gals. of water per acre. For band applications use a proportional amount of herbicide. Direct the spray toward the base of established ornamentals or ornamentals transplanted at least 10 days. Apply before weeds emerge or after removing existing weeds. Use the higher rates on fine-textured soil and where broadleaf weeds are expected to form a significant part of the infestation. Use the lower rates on coarse-textured soil and where light infestations of broadleaf weeds are expected. Apply posttransplant to the following field and liner grown ornamentals:

Arborvitae (Thuja spp.) Cotoneaster (Cotoneaster spp.) Crabapple (Malus spp.) Holly (Ilex spp.), Boxleaf Japanese, Japanese Juniper (Juniperus spp.), Andorra, Creeping, Shore Leucothoe (Leucothoe spp.) Osmanthus (Osmanthus spp.) Weigela (Weigela spp.) Yew (Taxus) spp.), Dwarf Japanese

Note: Length of weed control may be reduced when continuous wet soil conditions follow herbicide application.

Precautions: Do not use on seedbeds or on unrooted cuttings. Do not use in greenhouses or other enclosed areas.

-29-

Tree Plantations for Timber

Apply before weeds emerge or following removal of weed growth. Apply before or after seedling transplanting. If applying after transplanting, application may be made over the top of tree seedlings before new growth appears. If new growth is present, direct the spray to avoid tree foliage contact. Do not use on seed nurseries or injury may occur. Apply only once per year.

The following rates are based on broadcast treatment in 20-100 gals. of water per acre. For band or spot applications, reduce the broadcast rate in proportion to the area actually sprayed.

1. [Black Walnuts (PLand)

Apply 2.5-5 lbs. per acre.

Slash Pine and White Pine

Use for establishment in the South only. Apply 5-7.5 lbs. per acre.

Vioblolly Pine

Use for establishment in the South only. Apply either 5-7.5 lbs. of Princep 80W per acre or a tank mix of 4-6 lbs. of Princep 80W plus 1-2 lbs. of AAtrex 80W (or 0.9-1.75 lbs. AAtrex Nine-O or 0.8-1.6 qts. AAtrex 4L or 4LC) per acre. The tank mix provides broad spectrum annual weed control (see list in General Information section of this label) and better weed control in limited rainfall areas than Princep 80W alone.

	entral U.S. Flor Terms on the following species of trees:
N American beech	red pine (Norway pine)
balsam fir	red spruce
N-black locust	Russian olive
caranga	Scotch pine
boowpob	*sweet gum
🚯 Teastern red cedar	*white ash
honey locust	white cedar
maple	*white oak
Norway spruce	white pine
	white spruce
red oak	

.

1

AAtrex Nine-O or 2 gts. AAtrex 4L or 4LC) per acre may be applied in a minimum of 25 gals. of water.

Precautions: Apply only once per year. On sandy soil, do not use more than 2.5 lbs. Princep 80W per acre and do not use the tank mix. Do not apply the tank mix directly to seedlings after the start of bud break.

-31-

furfgrasses for Sod

St. Augustinegrass, Centipedegrass, and Zoysia Grass

Apply 2.5-5 lbs. per acre, according to soil texture as indicated below.

Muck	5 lbs.	Old	within 2 days after
or peat		beds	lifting of sod
		New beds	3-4 days after sprigging or plugging
Sandy	2.5 lbs.	Old	within 2 days after
soil		bejs	lifting of sod
		New beds	7-10 days after sprigging or plugging

If weeds regrow, apply an additional 2.5 lbs. on muck or peat, or 1.25 lbs. on sandy soil.

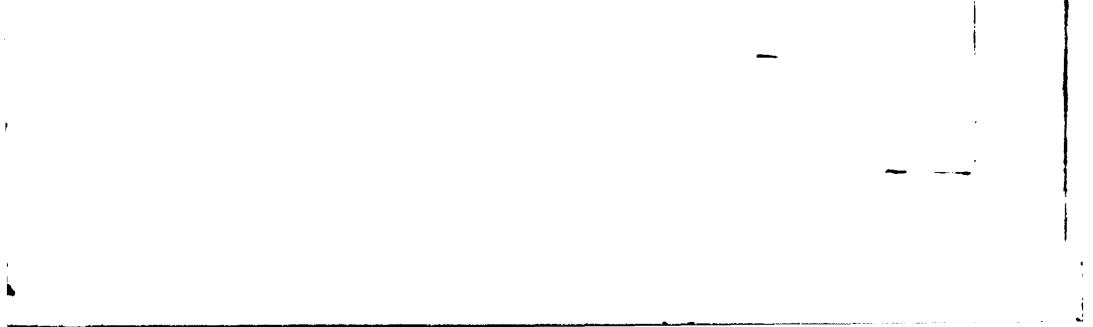
Precautions: 1) Do not apply within 30 days before cutting or lifting. 2) Do not use north of NC.

Turfgrass for Fairways, Lawns, and Similar Areas

Bermudagrass, Centipedegrass, St. Augustinegrass, and Zoysia Grass

Apply Princep 80W after October 1 before emergence of (wintep (annual weeds for control of (annual bluegrass, burclover, (carpet) (burweed) (chickweed) (corn speedwell), henbit, (hop clover) and (spurweed) Princep 80W will control annual bluegrass even if it is emerged at time of treatment. For control of (summer annual weeds listed in the General Information section of this label, also apply Princep 80W in late winter before the weeds emerge. Apply in a minimum of 15 gals, of water per acre or 1 gal. per 1,000 sq. ft.

-32-



Where annual bluegrass is the major weed, use 1.25 lbs. of Princep 80W per acre (0.5 oz. per 1,000 sq. ft.). Use 2.5 lbs. per acre (1 oz. per 1,000 sq. ft.) for control of the other weeds named above. Do not exceed 1.25 lbs. per acre per treatment on newly sprigged turfgrass or on hybrid bermudagrass such as Tiflawn, Tifway, and Ormond.

For continued summer annual weed control, apply another 1.25 lbs. per acre at least 30 days after the previous application, but not after April 15. However, do not make more than two applications of this product per year.

<u>Precautions</u>: To avoid injury, use only on turfgrass reasonably free of infestations of insects, nematodes, and diseases. Do not use on golf greens. Do not use north of NC or west of the high rainfall areas of eastern OK and eastern TX. Do not use on muck or alkaline soils. Do not apply over the rooting area of trees or ornamentals not listed on this label. On newly sprigged turfgrass, temporary slowing of growth may follow application. On hybrid bermudagrass, temporary yellowing may occur. Do not overseed with desirable turfgrass within 4 months before or 6 months after treatment.

Yegetable Crops

Asparagus (Established)

Apply 2.5-5 lbs. per acre to beds established one year or more. Apply once per year either after disking in the spring before weeds emerge, or following harvest after removal of existing weed growth. Spring application must be made at least 3 days before first cutting.

Precautions (WA and OR only): 1) Do not apply on gravelly, sand, or loamy sand soil or crop injury may result. 2) Do not allow irrigation water to stand or to form pools in the field or injury may occur.

-33-

Artichokes

Apply 2.5-5 lbs. per acre as a directed spray after the last fall tillage.

Precautions: 1) Do not apply on gravelly, sand, or loamy sand soil. 2) Apply only once per year.

Nonselective Weed Control on Noncrop Land-

Best results are obtained when Princep 80W is applied before weeds emerge. If weed growth has begun and removal is not feasible, include a contact or translocated herbicide in the spray.

Princep 80W provides long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-way, lumberyards, petroleum tank farms, and in moncrop-areas on farms, such as around buildings, equipment and fuel storage areas, along fences, roadsides, and lanes. Do not use this product for nonselective weed control on land to be cropped, near adjacent desirable trees, shrubs, or plants, or in greenhouses, as injury may occur. Do not use in areas accessible to livestock or allow livestock to graze treated weed foliage.

Aerial applications may be made where it is feasible. Use at least 1 gal. of water for each 1 lb. of Princep 80W for both ground and aerial applications. Use more water if practical.

To control annual broadleaf and grass weeds (including barnyardgrass, cheat, crabgrass, common lambsquarters, foxtall, ragweed, puncturevine, and turkey mullein) apply 6-12.5 lbs. per acre.

To control most annual and many perennial broadleaf and grass weeds (including quackgrass, bluegrass, redtop, burdock, Canada thistle, orchardgrass, purpletop, smooth brome, dogfennel, and plantain) apply 12.5-25 lbs. per acre.

To control hard-to-kill perennial weeds (including bull thistle and sowthistle) apply 25-50 lbs. per acre.

For longer residual control in regions of high rainfall and a long growing season, apply 25-50 lbs. per acre.

-34-

Tank Mixture with Roundup

This tank mixture will provide control of emerged annual weeds and residual control of weeds listed on the Princep label. The combination also will partially control emerged perennial weeds listed on the Roundup label. Add to the spray tank the appropriate rate of Princep noted in the above section for Princep alone. Then add 1-5 qts. of Roundup per acre depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant at 0.5% by volume of spray solution. Apply the mixture in a 10-40 gals. of water per acre as a postemergence spray at the appropriate weed growth stage given on the Roundup label. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the Application Procedures section of this label for further Cirections. Refer to the labels of both herbicides for specific noncrop sites, rates, weeds controlled, and further directions, precautions, and limitations.

Tank Mixture with Oust

Use this tank mixture to control the weeds listed below with either preemergence, early postemergence, or postemergence applications. Use the higher rates within the ranges given under conditions of heavy weed growth, on soil with over 2 1/2% organic matter, on areas with heavy decaying plant residues, or on high moisture areas such as along road edges or railroad shoulders. To improve wetting and/or contact activity on emerged weeds, add a nonionic surfactant such as DuPont Surfactant WK or X-77 at 1 gt. per 100 gals. of spray. Do not apply by aircraft. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to the labels of both herbicides for specific noncrop sites and further directions, precautions, and limitations.

Preemergence to Early Postemergence: To control the weeds listed below apply 5-10 lbs. of Princep 80W plus 3-5 ounces of Oust in a minimum of 25 gals. of water per acre.

-35-

Broadlesf Weeds (Up to 3-4" in Height or Diameter)

bouncingbet buckhorn plantain burclover Carolina geranium common chickweed common dandelion common speedwell common yarrow crimson clover dogfennel filaree hoary cress horsetail kochia lambsquarters little mallow mustard

C

Þ

p

ox-eye daisy pigweed prickly lettuce puncturevine purple starthistle ragweed Russian thistle sowthistle St. Johnswort sunflower sweet clover tansymustard tansy ragwort tumble mustard turkey mullein vetch wild carrot yellow rocket

Grasses (Up to 6-12" in Height)

Alta fescue annual bluegrass annual ryegrass bahia grass barnyardgrass cheatgrass cheatgrass downy brome fall panicum fescue foxtails Indian grass Italian ryegrass johnsongrass (short-term control) little barley red brome red fescue reed canarygrass ripgut brome ryegrass smooth brome sprangletop witchgrass

Postemergence: To control actively growing weeds listed below apply 10-20 lbs. of Princep 80W plus 6-12 ounces of Oust in a minimum of 25 gals. of water per acre.

Actively Growing Weeds

bedstraw Canada thistle curly dock dewberry fiddleneck fleabane goldenrod hemlock hemp dogbane	Jerusalem artichoke kudzu mayweed musk thistle poison ivy puncturevine Spanishneedles turkey mullein Virginia pepperweed	johnsongrass (season-long control) yellow nutsedge
honeysuckle	wild blackberry	

-36-

Storage and Disposal

¢

Store in a dry place. Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Pesticide, spray mixture, or rinse water that cannot be used according to label instructions must be disposed of according to applicable federal, state, or local procedures. Completely empty bag by shaking, and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of bags in a sanitary landfill or by incineration if allowed by state and local authorities.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes eye irritation. Harmful if inhaled or absorbed through the skin. Avoid breathing dust or spray mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

First Aid: If in eyes, flush with plenty of water. Get medical attention if irritation persists. If on skin, wash with soap and water. If inhaled, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth; get medical attention.

Environmental Hazards

Do not contaminate domestic, livestock or irrigation water supplies, or lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

AAtrex® trademark of CIBA-GEIGY for atrazine Compex® trademark of Kalo Laboratories, Inc. Dual® trademark of CIBA-GEIGY for metolachlor Eradicane® trademark of Studffer Chemical Co. Evik® trademark of CIBA-GEIGY for ametryn Princep® trademark of CIBA-GEIGY for sim4zina Nine-O® trademark of CIBA-GEIGY

-37-

U.S. ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS	EPA REGISTRATION NO.	DATE OF ISSUANCE
REGISTRATION DIVISION (HH-567) WASHINGTON, D.C. 2.44	TERN OF ISSUANCE	
NOTICE OF PESTICIDE:	NAME OF PESTICIDE PRODU	ĊT
(Under the Federal Insecticide, Eurgicide and Rodenticide Act, as ameniled)		
AME AND ADDRESS OF REGISTRANT (Include 21P code)		Let the start 7
F		11/ 102347
		16/ 102732
		37
L	L	11 10 3933
OTE: Changes in labeling formula differing in substance submitted to and accepted by the Registration Division pri product always refer to the above U.S. EPA registration nu	or to use of the label in commen	
In the basis of information furnished by the registrant, the basis of information furnished by the registrant, the basis of insecticide, Fungicide, and Rodenticide Act.		by Registered/Reregistered under
A copy of the labeling accepted in connection with this R	Agestration Peregistration is rel	in the second beautiful to the
Registration is in no way to be construed as an indorseme	nt or approval of this product by	this Agency. In order to protect
sealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant is right	name in connection with the regi	atration of a product under this
Registration is in no way to be construed as an indorseme health and the environment, the Administrator, on his moli icide in accordance with the Act. The acceptance of any r Act is not to be construed as giving the registrant is right by others,	nt or approval of this product by ion, may at any time suspend or name in connection with the regi	this Agency. In order to protect cencel the registration of a pest- atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
sealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant is right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this
nealth and the environment, the Administrator, on his moti	nt or approval of this product by	this Agency. In order to protect
icide in accordance with the Act. The acceptance of any r	ion, may at any time suspend or	cencel the registration of a pest-
Act is not to be construed as giving the registrant a right	name in connection with the regi	atration of a product under this

ł

-

Permanent Label (Booklet)

> ACCEPTED SEP 2 1983

Ł

• •

• . . **. .** •

•

•:...:

Princep[®] 80W

Herbicide

`

For weed control in certain crops, ornamental plantings, on industrial sites, and around-the-farm

EPA Reg. No. 100-437

Princep 80W is a wettable powder

Keep Out of Reach of Children.

Caution

See additional precautionary statements at end of booklet.

See directions for use inside booklet.

CIBA-GEIGY

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the <u>Directions for Use</u> subject to the inherent risks referred to above. <u>CIBA-GEIGY</u> makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing <u>Conditions of Sale and Warranty</u>, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

Directions for Use

1

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

FAILURE TO FOLLOW PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR WEED CONTROL, AND/OR ILLEGAL RESIDUES.

General Information

Apply Princep 80W Herbicide before weeds emerge or after removal of weed growth. Princep controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops and ornamental plantings. When used at higher, nonselective rates in noncrop areas, it also controls many perennial broadleaf and grass weeds.

Where a range of application rates is given, use the low rate on coarser textured soil and soil lower in organic matter; use the high rate on finer textured soil and soil higher in organic matter.

Since Princep enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions and lack of rainfall following application may necessitate shallow cultivation.

Princep 80W is noncorrosive to equipment, nonflammable, and has low electrical conductivity.

Annual Weeds Controlled

alyssum annual bluegrass annual morningglory 'annual ryegrass barnyardgrass (watergrass) burclover carelessweed *carpetweed* common chickweed crabgrass (Digitaria spp.) downy brome (cheatgrass) fall panicum fiddleneck filaree fireweed fivehook bassia Flora's paintbrush florida pusley foxtails goosegrass groundsel henbit ^vjunglerice knawel (German moss)

common lambsquarters hightshade pepperweed pigweed pineappleweed prickly lettuce common purslane ragweed rattail fescue -redmaids Russian thistle shepherdspurse signalgrass (Brachiaria spp.) silver hairgrass smartweed spanishneedles speedwell tansymustard wild mustard wild oats Witchgrass yellow flower pepperweed

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in registered combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult with your State Agricultural Extension Service for specific recommendations.

Application Procedures

Ground application: Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and the same size. Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gals, of spray mixture per acre.

-4-

Use a pump with capacity to (1) maintain 35-40 psi at nozzles, (2) provide sufficient agitation in tank to keep mixture in suspension, and (3) to provide a minimum of 20% bypass at all times. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 10 gals./minute/100 gal. tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

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

band width in inches X broadcast rate _ amount needed row width in inches per acre per acre of field

Aerial application: Use aerial application only where specified in the use directions. Apply in a minimum of 1 gal. of water for each 1-1.5 lbs. of wettable powder applied per acre. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin, and should wash thoroughly before eating and at the end of each day's operation.

Mixing procedures - all uses: (1) Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. (2) Fill tank 1/4 full with clean water, nitrogen solution, or complete fluid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from bag into tank. (6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (7) Add tank mix herbicide(s) after this product is thoroughly suspended. (8) Finish filling tank. Maintain agitation to avoid separation of materials. (9) Empty tank as completely as possible before refilling to prevent buildup of emulsifiable concentrate residue from possible tank mix herbicides. (10) If an emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. (11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

-5-

Compatibility test: To determine the tank mix compatibility of Princep 80W with liquid fertilizer, crop oil, spreaders, or recommended pesticides, use this test method. Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray in alfalfa and corn. Since liquid fertilizers can vary, even within the same analysis, check compatibility each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more apt to occur. Commercial application equipment may improve compatibility in some instances. Check compatibility using this procedure:

- 1) Add 1 pint of fertilizer to each of 2 one-quart glass jars with tight lids.
- 2) To one of the jars add 1/4 tsp. of a compatibility agent approved for this use (1/4 tsp. is equivalent to 2 pts. per 100 gals. spray). Cap and shake until mixed. Examples of compatibility agents include Compex• and Unite•.
- 3) To both jars add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, cap and shake until thoroughly mixed. The appropriate amount of herbicides for this test follows (assuming a spray volume of 25 gals. per acre):

Dry herbicides:	For each pound per acre add 1.5 teaspoons to each jar. Fluff up wettable powder products before measuring.

Liquid herbicides: For each pint per acre add 0.5 teaspoon to each jar.

For a spray volume other than 25 gals. per acre, change the teaspoons added to each jar as follows:

25 gals. X no. teaspoons given above _ teaspoons to add desired gals. spray volume per acre to each jar

4) After adding all ingredients, put lids on and tighten. Shake jars vigorously one minute. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, grease, gels, medium to heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can probably be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water

-6-

before addition, or (B) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If still incompatible, do not use the materials mixed in the same spray tank.

Rotational Crops and Perennial Crop Replanting

To avoid crop injury, observe the following precautions: 1) If rotating treated land the year following application, plant only corn, unless otherwise stated in this label. 2) If replanting perennial crops or if rotating land to crops other than corn, do not apply Princep in the year preceding planting these crops.

Fruit and Nut Crops

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage, or stems. Apply only to orchards or groves where trees have been established one year or more unless specified differently. Make only one application per year, except as noted otherwise. Recommended rates are based on broadcast treatment. For band applications or spot applications around trees in fruit or nut plantings, reduce the broadcast rate of Princep 80W and water per acre in proportion to the area actually sprayed.

Almonds and Peaches (CA only)

Apply 1.25-2.5 lbs. of Princep 80W per treated acre in a 2-4 ft. band on each side of the tree row. Apply before weeds emerge in late fall or early winter. Weeds controlled by 1.25 lbs. of Princep 80W include burclover, common chickweed, wild mustard, and shepherdspurse. Apply only once per year.

Precautions: 1) Do not treat trees established in the grove less than 3 years. 2) Do not treat the Mission (Texas) variety of almonds. 3) Do not apply to almond trees propagated on plum rootstocks. 4) Do not replant almonds or peaches in treated soil for 12 months after treatment. 5) Do not apply on gravelly, sand, or loamy sand soil or on soil with less than 1% organic matter. 6) Do not treat areas where water will accumulate.

Apples, Pears, Sour Cheiries

Apply 2.5-5 lbs. per acre.

V Avocados

CA and FL only: Apply 2.5~5 lbs. per acre after final preparation of grove.

Precaution: Do not apply on gravelly, sand, or loamy sand soil.

Blueberries and Caneberries (blackberries, boysenberries, loganberries, raspberries)

Apply 2.5-5 lbs. per acre in the spring or apply a split application of 2.5 lbs. per acre in the spring plus 2.5 lbs. per acre in the fall. Apply in a minimum of 40 gals. of water per acre.

On plantings less than 6 months old, use 1/2 the above rate.

To control quackgrass, apply 5 lbs. per acre in the fall or split the application applying 2.5 lbs. per acre in the fall plus 2.5 lbs. per acre in the spring, when quackgrass is actively growing.

Note: Do not apply when fruit is present.

Cranberries whe want tathauest

MA: Apply up to 5 lbs. per acre either before spring growth begins or in the fall after harvest.

Other areas: Apply 2.5 lbs. per acre before spring growth begins.

VFilberts

Apply 2.5-5 lbs. per acre in the fall or apply a split application of 2.5 lbs. per acre in the fall plus 2.5 lbs. per acre in the spring.

Precautions: 1) If trees are planted on a hillside, excessive soil prosion may result from the elimination of weeds. 2) Do not apply on gravelly, sand, or loamy sand soil. Note: Do not apply when nuts are on the ground during the harvest period.

Grapes (in scored) ration)

Apply 2.5-6 lbs. per acre any time between harvest and early spring.

Precaution: Do not use in vineyards established less than three years. Do not apply on gravelly, sand, or loamy sand soil.

Grapefruit, Lemons, Oranges

AZ (Lemons and Oranges only): Apply a split application of 2 lbs. per acre in the spring plus 2 lbs. per acre in the fall.

CA: In grapefruit, lemons, and oranges, apply 2.5-5 lbs. per acre in a single application; or apply 2.5 lbs. per acre in the fall and 2.5 lbs. per acre in the spring. Do not use in the Imperial, Coachella, or Palo Verde valleys.

FL (Grapefruit and Oranges only): Apply only once per year. For control of weeds listed under General Information, apply 8-12 lbs. per acre in the spring; to control milkweed vine, use 10-12 lbs. per acre either preemergence or before vines are 12 inches tall.

TX (Grapefruit and Oranges only): Apply 5-6 lbs. per acre.

Precautions (All areas): 1) Do not use in nurseries. 2) Do not apply to bedded grapefruit, lemons, or oranges. 3) To avoid possible injury, do not apply to trees under stress from freeze damage for one year after the freeze.

🗸 Macadamia Nuts

Apply 2.5-5 lbs. in 50 gals. of water per acre before harvest and just prior to weed emergence. Repeat application as necessary. Do not apply when nuts are on the ground during the harvest period. V_{0lives}

Apply 2.5-5 lbs. per acre following grove preparation in the fall. Repeat annually in midwinter.

Peaches, Plums, Sweet Cherries

Apply 2-5 lbs. per acre. Apply in late fall to early spring prior to weed emergence.

Precautions: 1) Do not apply on gravelly, sand, or loamy sand soil. 2) Peaches: use only in AR, LA, MO, OK, TX, and states east of the Miss. River. For California, see specific directions in the section "Almonds and Peaches (CA only)." 3) Plums and sweet cherries: use only in MO and states east of the Miss. River except TN.

Pecans

Apply the appropriate rate in the following table before weeds emerge in the spring.

Soil texture	Rate per acre
Sand, loamy sand	Do not use
Sandy loam	2.5 lbs.
Loam or clay soil low in organic matter	2.5-3.5 lbs.
Clay soil high in organic matter	3.5-5 lbs.

<u>Precautions</u>: Do not use west of the Pecos River in TX or in NM, AZ, or CA, or injury will occur. Do not make applications to transplanted trees that have been established less than two years in the grove or injury may occur.

Note: Do not apply when nuts are on the ground. Do not allow animals to graze treated areas.

🔰 Strawberries)

Oregon and Washington: For control of chickweed, groundsel, mustard, and shepherdspurse, apply broadcast 1.25 lbs. per acre. In fields where overhead irrigation is used to activate this product, apply after harvest at time of bed renovation. In fields where overhead irrigation is not available, apply during early October through November.

Precautions: Make only one application per growing season. Do not apply within 4 months after transplanting. Limit overhead irrigation to 1/2 inch immediately following postharvest application. Do not use on sand.

↓ Walnuts

Apply 2.5-5 lbs. per acre.

Precautions: 1) Do not apply on gravelly, sand, or loamy sand soil. 2) Leveling and furrowing operations after application will lessen effectiveness of weed control.

Note: Do not apply when nuts are on the ground.

Princep 80W Plus Evik* 80W for Grapefruit and Oranges

Use in grapefruit and oranges in FL and TX for control of weeds listed in the following directions and under General Information. Apply the rates given below in a minimum of 40 gals. of water per acre thoroughly covering existing vegetation, but avoiding contact with citrus fruit, foliage, or stems. Do not spray when windy. Apply when weeds have resumed active growth in the spring, but before they exceed 4 inches in height (except as noted for vines). Apply only once per year. To avoid possible injury, do not use in nurseries, or around trees that have been established in the grove less than two years, or where trees are under stress from freeze damage for one year after the freeze. Do not apply within 30 days before harvest. Do not graze treated areas. Observe all precautions and limitations on the labeling of Princep 80W and Evik 80W.

FL (Ridge Area): Apply 5 lbs. of Princep 80W plus 5 lbs. of Evik 80W per acre; controls milkweed vine when applied either preemergence or on vines up to 24 inches tall.

FL (Bedded Areas): Apply 4 lbs. of Princep 80W plus 6 lbs. of Evik 80W per acre; controls balsamapple when applied either preemergence or on vines up to 12 inches tall.

TX: Apply 4-5 lbs. of Princep 80W plus 2-3 lbs. of Evik 80W per acre plus 2 gts. nonionic surfactant, such as X-77•, per 100 gals. of spray mixture (add surfactant to spray tank last); controls buffelgrass, marinevine (ivy treebine), TX panicum, sandbur, and sunflower, and gives top kill of johnsongrass. Use 5 lbs. of Princep 80W per acre for longer residual control; use 3 lbs. of Evik 80W per acre for control of heavy weed growth and for top kill of johnsongrass; use the higher rate of both products for control of marinevine.

Princep 80W Plus Bromacil 80W for Grapefruit and Oranges (Florida Only)

Use in grapefruit and oranges in FL for control of balsamapple, black nightshade, carpetweed, crabgrass, cudweed, dayweed, Florida pusley, horseweed, pepperweed, pigweed, poorjoe, ragweed, rattlebox, Spanishneedles and sandbur, and for partial control of bermudagrass, bahiagrass, pangolagrass, paragrass, and torpedograss. Apply 4-8 lbs. of Princep 80W plus 3-4 lbs. of bromacil 80W per acre beneath trees in a minimum of 40 gals. of water per acre before or soon after weed growth begins. Avoid contact of foliage and fruit with spray or mist. Apply only once per year. Use the lower rates for light weed infestations or all applications in bedded citrus areas. Use the higher rates for heavy weed infestations only in ridge grown citrus areas. Temporary yellowing of citrus leaves may occur following treatment.

Precautions: To avoid possible injury, do not use in nurseries, or around trees that have been established in the grove less than four years, or where trees are under stress from freeze damage for one year after the freeze. Do not use on soil with less than 1% organic matter or on poorly drained soil. Do not treat trees planted in irrigation furrows. Do not treat diseased trees such as those with foot rot. Do not use in groves interplanted with other trees or desirable plants, nor in home grapefruit or orange plantings, or in areas where roots of other valuable plants or trees may extend. Treated areas may be planted to citrus trees one year after application. Do not rotate to other crops within two years after application.

Princep 80W Plus Paraquat

This tank mix is effective in the following fruit and nut crops for kill of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for Princep 80W applied alone. This combination is also effective for top kill and suppression of perennial weeds. Use this tank mix on these crops:

almonds (CA only) macadamia nuts apples olives avocados (CA & FL^1 only) oranges cherries (sour and sweet") peaches³ filberts pears grapefruit (CA, FL' & TX only) pecans grapes plums lemons (AZ & CA only) walnuts

Apply the Princep 80W rate given under the appropriate crop on this label plus 1-2 qts. paraquat* in 50-200 gals. (30-50 gals. for pecans) of water per acre to the orchard floor avoiding contact with fruit, foliage, or stems. Add a nonionic surfactant, such as X-77, at 0.5 pt. per 100 gals. of spray. Apply when weeds are succulent and new growth is 1-6 inches tall. For mature woody weeds or difficult to control perennial weeds, retreat or spot treat with paraquat if regrowth occurs. Apply the tank mix only once per year. Do not spray under windy conditions. Use a shield for young trees or vines.

Add Princep 80W to the spray tank first (refer to Mixing Instructions section of this label) then add paraguat, and add the surfactant last. Provide constant agitation during mixing and application to keep the mixture in suspension.

Refer to the Princep 80% and paraquat labels for further directions, specific weeds controlled, and precautions and limitations on each crop.

- *In avocados in Florida, this tank mix also controls balsam~ apple vine, rattail amaranth, and at the higher rate of each herbicide, it suppresses coral view.
- *In grapefruit and oranges in Florida, apply 4 lbs. Princep 80W per acre in bedded areas and 8-12 lbs. Econop 80W per acre in ridge areas.

"Limited to CA, AR, LA, MO, OK, TX, and states east of the Miss. River. As appropriate, refer to Princep 80W sections "Almods and Peaches. "A only)" or "Peaches, Plums, Sweet Cherries" for rate of Princep 80W and other information.

"Dimited to MD and states east of the Miss. River except TN.

"Based on a product containing 2 lbs, paraduat dation per gal.

-14-

Tank Mixture with Roundup®

This tank mixture is effective in grape vineyards and in the following bearing or nonbearing tree crops for control of existing vegetation and for residual control of the annual broadleaf and grass weeds claimed for this product applied alone. This combination is also effective for partial control of perennial weeds contacted by the spray mixture during application. Take extreme care in applying the tank mixture to keep it off fruit, foliage, of stems, or suckers or desirable plants. Observe precautions on both the Princep and Roundup labels for each crop involved. Use this tank mixture on these crops:

Almonds** (CA only)	Macadamia Nuts**
Apples*	Oranges* (AZ,CA,FL ¹ & TX)
Avocados* (CA and FL only)	Oranges* (AZ,CA,FL ¹ & TX) Peaches* ²
Cherries (sour and sweet ³)	Pears*
Filberts**	Pecans**
Grapefruits* (CA,FL ¹ ,TX)	Plums* ³
Grapes*	Walnuts**
Lemons* (AZ & CA)	

Use the appropriate rate given elsewhere on this label for Princep applied alone in the crop being treated. Add to the spray tank 1-5 qts. of Roundup per acre depending on weeds present and their growth stage. Also add an agriculturally approved nonionic surfactant at 0.5% by volume of spray solution. Apply the mixture in 10-40 gals. of water per acre as a postemergence spray to the weeds at the appropriate weed growth stage given on the Roundup label.

Add Princep to the spray tank first, then add Roundup. Provide constant agitation during mixing and application to keep the mixture in suspension. Refer to Application Procedures section of this label for further directions.

Refer to the labels of both herbicides for further directions, specific weeds controlled, precautions and limitations on each crop.

*Allow a minimum of 14 days between last application and harvest.

**Allow a minimum of 21 Bays between last application and harvest of these crops.

¹ In graphfront and manages in Florida, apply 3.5 lbs. of this product per acre in Fedded area, and 7.1-10.6 lbs. per acre in ridge areas.

-15-

1

²Limited to CA, AR, LA, MO, OK, TX, and states east of the Mississippi River. For CA, see specific directions in the section "Almonds and Peaches" (CA only).

³Plums and sweet cherries: limited to MO and states east of the Mississippi River except TN.

Princep 80W Plus Surflan*

Use this tank mix in the following crops for preemergence control of all weeds claimed on both labels:

almonds	lemons
apples	oranges
avocados	peaches
caneberries	pears
cherries	pecans
filberts	plums
grapes	English walnuts
grapefruit	

Apply the Princep 80W rate given under the appropriate crop on this label plus 2.67-5.33 lbs. of Surflan 75W or 2-4 gts. of Surflan A.S. in 20-40 gals. of water per acre. Refer to the Surflan 75W or Surflan A.S. label for complete tank mix directions. Observe all precautions and limitations on the Princep and Surflan labels.

Field and Forage Crops

Alfalfa

Pure alfalfa at least one year old, pure alfalfa less than one year old, and alfalta-orchardqrass mixtures at least one year old

For ground application, apply Princep 80W in a minimum of 15 gals, of water per acre. Fluid fertilizer may replace all or part of the water used as a carrier, except fluid fertilizers should not be used when alfalfa is actively growing as injury may occur. Check the physical compatibility of Princep 80W with fertilizer before use. Refer to the General Information section of this label for a compatibility test procedure.

For aerial application, apply Princep 80W in a minimum of 2.5 Jals, of water per acre.

1

-16-

\bigvee <u>Pure Alfalfa At Least One Year Old</u> (All Areas Listed)

Apply once per year in the fall after the last cutting but prior to permanently frozen ground conditions. Alfalfa may be actively growing, semidormant, or dormant when the application is made.

Alfalfa must be growing for at least one year before treatment.

Alfalfa Regions	Weeds controlled	Soil texture	Rate of Princep 80W per a cre
WA, OR, NV, UT, ID, MT, WY, CO, and CA counties of Del Norte, Siskiyou, Modoc, Shasta, Lassen, Plumas, Sierra, and Nevada	Downy brome (cheatgrass), tansymustard, prickly lettuce, pepperweed, seedling shepherds- purse, yellow flower pepperweed	Sand and loamy sand Sandy loam Loam soil Clay soil	DO NOT USE 1 lb. 1-1.5 lbs. 1.5-2 lbs.
ND, SD, MN, WI, NE, KS, IA, MI, and NY	Henbit, wild mustard, common chickweed, knawel (German moss), alyssum, downy brome (cheatgrass), wild oats, pepper- weed, tansymustard, pigweed, speedwell, and seedlings of yellow rocket, shepherdspurse, white cockle, fan- weed (pennycreus), dandelion, Ruesian thirtle, kochia	Sand and loamy sand Sandy loam Loam soil Clay soil	DO NOT USE 1 1b. 1.5 1bs. 2 1bs.

/Continued ... 18

ł

ŧ

IL, IN, OH, KY, TN, NC*. VA, PA, NJ, DE, MD, WV, VT, MA, CT, ME, NH, RI, and MO *use only on loam and clay soils.	Pigweed, common chickweed, mouse- ear chickweed, speedwell, henbit, knawel (German moss), pepperweed, downy brome, alyssum, common lambsquarters, wild oats, and seedlings of shepherdspurse,	Sand and loamy sand Sandy loam Loam soil Clay soil	DO NOT USE 1 1b. 1.25 1bs. 1.5 1bs.
	fanweed (penny- cress), yellow rocket (winter- cress), Russian thistle, dandelion, kochia, white cockle		

V Pure Alfalfa Less Than One Year Old (Northeastern U.S. Only)

Pure alfalfa which has been seeded in the spring before June 1 and has become well established may be treated in the fall after the last cutting but before permanently frozen ground conditions. Alfalfa may be actively growing, semidormant, or dormant when Princep is applied. Apply 1 lb. of Princep 80W per acre to control henbit, wild mustard, common lambsquarters, common chickweed, German moss, alyssum, downy brome (cheatgrass), wild oats, tansymustard, pigweed, speedwell, and pepperweed.

(<u>Established Alfalfa-Orchardgrass Mixtures</u> (Northeastern U.S.

Apply only to alfalfa-orchardgrass mixtures which have been established at least one year. Make a single application in the fall after the alfalfa-orchardgrass mixture has gone dormant. Applications should be uniformly broadcast at the rate of 1 lb. of Princep 80W per acre to control henbit, wild mustard, common lambsquarters, common chickweed, German moss, alyssim, downy brome (cheatgrass), wild oats, tansymustard, pigweed, speedwell, and pepperweed.

-18-

Precautions (For Each Use): 1) Do not use on gravelly, sand, loamy sand, or on soil low in organic matter, or crop injury may occur. 2) Applications made to alfalfa growing on highly calcareous or highly alkaline soil may result in crop injury. 3) Use only in areas where frost occurs and alfalfa goes into a semidormant or dormant state. 4) Do not apply on snow. 5) Princep will not control dodder and established perennial or biennial weeds such as dandelion, white cockle, quackgrass, cinquefoil, wild carrot, and dock. 6) Temporary crop chlorosis may appear on areas where overlapping occurs. The sprayer should be shut off when turning around at the end or corners of the field. 7) Do not rotate to any crops except corn for the growing season following application as injury may occur.

1

Note: Allow 30 days between application and grazing of dairy and beef cattle and sheep, and allow 60 days between application and cutting for hay.

Princep BOW Plus Paraquat for Alfalfa (WA, OR, NV, UT, ID, MT, WY, CO, and CA counties of Del Norte, Siskiyou, Modoc, Shasta, Lassen, Plumas, Sierra, and Nevada)

Controls filaree, Jim Hill mustard, and shepherdspurse, and gives improved control of bluegrass, cheatgrass, common chickweed, and tansymustard. Apply 1-2 lbs. of Princep 80W plus 1-3 pts. of paraquat* in 20-100 gals. of water per acre with ground equipment or in 5-10 gals. of water per acre aerially. Refer to the Princep 80W rate chart for rates on specific soil textures. Use 1 pt. of paraguat when weeds and grasses are less than 4 inches tall. Apply when weeds are succulent and growth is 1-6 inches tall. Apply to established alfalfa after the last fall cutting when the crop is dormant and before spring growth starts. Do not apply if regrowth following the last fall cutting is more than 2 inches tall. Alfalfa foliage present at application will be barned. Apply once per growing season. Do not pasture animals in treated fields before first cutting. Do not graze, cut, or harvest within 90 days after application. Observe all precautions and limitations on the labeling of Princep 80W and paraguat.

*Based on a product containing 2 lbs, paraguat cation per gal.

-19-

/Forage Bermudagrasses (Such as Coastal and Midland)

For preemergence control of most annual broadleaf and grassy weeds including barnyardgrass, crabgrass, Brachiaria spp., goosegrass, foxtail, carelessweed, carpetweed, annual morningglory, pigweed, common purslane, Russian thistle, common chickweed, henbit, and burclover, apply Princep 80W shortly after sprigging. Apply it to established bermudagrass from fall to spring depending on the weed problem, but before weed emergence. Use the appropriate rate in the following table in a minimum of 15 gals. of water per acre for ground application and in a minimum of 1 gal. of water for each 1-1.5 lbs. of wettable powder per acre for aerial application.

Soil texture	Rate per acre
Fine sandy soil low in organic matter	1 lb.
Sandy loam soil	1.5-2.5 lbs.
Loam and clay soil low in organic matter	2.5-3 lbs.
Clay soil	3-4 lbs.

-20-

U

Precautions: 1) Do not use Princep 80W on bermudagrass in NM and the High Plains of TX. 2) Do not apply within 7 days after cutting.

Note: Do not graze dairy or beef cattle or sheep for 30 days after 1-3 lbs, per acre application or for 60 days after 4 lbs, per acre application. Do not cut for hay for 60 days after 1-3 lbs. per acre application or for 90 days after 4 lbs. per acre application.

۱

Corn

Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray. Determine the physical compatibility of Princep 80W with fertilizer before use. Refer to the General Information section of this label for a compatibility test procedure. Do not apply after corn has emerged as there is danger of liquid fertilizers causing crop injury.

Preemergence: Apply before weeds and corn emerge. Use the appropriate rate in the table below.

<u>Preplant</u>: Apply in the spring after plowing at the appropriate rate in the table below. Apply before, during, or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Princep 80W. Best results will be obtained when Princep 80W is applied within 2 weeks before planting.

Note: Under dry weather conditions, preplant applications may give better weed control.

Soil texture	Broadcast* rate per acre
Coarse-textured soil: Sand, silt, and loam that is low in organic matter	2.5 lbs.
Medium-textured soil: Soil containing a moderate amount of clay and organic matter	3 lbs.
Fine-textured soil: Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt)	3.75 lbs.
Organic soil: Peat, muck, and high-organic clay	5 lbs.

*For calculation of band treatment rate, see the General Information section.

To control quackgrass: Apply 3.75-5 lbs. per acre in the fall. Plow two to three weeks later, or if erosion is a problem, delay plowing until spring. Do not plant any crop except corn in the spring following treatment. Do not graze treated area.

Note: If weeds develop, particularly under relatively dry conditions, a shallow cultivation will generally result in hetter weed control.

-22-

Precautions: 1) Do not apply more than 5 lbs. of Princep 80W per acre to corn per year. 2) Do not rotate to any crop except corn until the following year or injury may occur. 3) After harvest, plow and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used. 4) If more than 3.75 lbs. of Princep 80W is used per acre (or equivalent rate in a band), a crop of untreated corn should precede the next rotational crop. 5) Do not apply Princep 80W preplant incorporated in corn in the High Plains and Intermountain areas of the West (including central and western KS, western NE, western OK, and the Panhandle of TX) where rainfall is sparse and erratic or where irrigation is required. 6) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Princep 80W to control weeds in corn only when corn is to follow corn or when a crop of untreated corn is to precede another rotational crop. 7) In western MN and eastern parts of the Dakotas, NE, and KS, do not plant soybeans following corn treated with Princep if more than 2.5 lbs. of Princep 80W per acre (or equivalent rate in a band) was applied or injury may occur. 8) Injury may occur to soybeans planted in north-central and northwest IA, southcentral and southwest MN, northeast NE, southeast SD, and other areas the year following application on soils having a calcareous surface layer. 9) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year after Princep 80W application or injury may occur.

Tank Mixtures on Corn

AAtrex*: Use Princep 80W in a preplant or preemergence tank mixture with AAtrex Nine-O*, AAtrex 80W, or AAtrex 4L (4LC) for control of many annual weeds, including carpetweed, crabgrass, fall panicum, foxtail, lambsquarters, morningglory, pigweed, ragweed, and velvetleaf.

Apply at the rates given below. Use the 1:1 ratio for most weeds and the 2:1 ratio for expected heavy infestations of crabgrass and fall panicum.

-23-

	Broadcast rate per acre			
	1:1 Ratio		2:1 Ratio	
Soil texture	Princep 80W	AAtrex 80W*	Princep 80W	AAtrex 80W*
Sand, loamy sand, sandy loam	1.25 lbs.	1.25 lbs.	1.67 lbs.	0.83 lb.
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with low organic matter	1.5 lbs.	1.5 lbs.	2 lbs.	1 lb.
Loam, silt loam, silt, clay loam, sandy clay loam, silty clay loam, sandy clay, or silty clay with medium to high organic matter, and clay (including dark prairie soils of the Corn Belt)	1.8 lbs.	1.8 lbs.	2.4 lbs.	1.2 lbs.

*When using AAtrex 4L (4LC) or AAtrex Nine-O, use equivalent rates. One lb. of AAtrex 80W equals 0.8 qt. of AAtrex 4L (4LC) or 0.9 lb. of AAtrex Nine-O.

-24-

Refer to the AAtrex label for complete directions. Also refer to the AAtrex label and the Corn section of this label for precautions and limitations.

Eradicane[®]: Use in a preplant incorporated tank mixture for control of all weeds claimed on both the Princep and Eradicane labels including partial control (suppression) of shattercane (wild cane). Fluid fertilizer may replace all or part of the water in the spray. Check the physical compatibility of mixture with fertilizer before use. Refer to the General Information section of this label for a compatibility test procedure. Use a minimum of 20 gals. of spray volume per acre. Refer to the Eradicane label for incorporation directions. Use the higher rate of Princep on fine-textured soil and where heavy broadleaf infestations are expected. Use the higher rate of Eradicane for heavy nutsedge and bermudagrass infestations. For partial control (suppression) of shattercane, broadcast and incorporate immediately before planting 1.25-2.5 lbs. of Princep 80W plus 7.33 pts. of Eradicane 6.7E (or 8 pts. Eradicane Extra) per acre. For control of the other weeds claimed on both labels, broadcast and incorporate 1.25-3.75 lbs. of Princep 80W plus 4.75-7.33 pts. of Eradicane 6.7E (or 5.33-8 pts. of Eradicane Extra) per acre. Observe all precautions and limitations on the Princep 80W and Eradicane labels.

<u>Paraquat</u>: Use in a tank mixture where corn will be planted directly in a cover crop, established sod, or previous crop residues. This combination controls existing vegetation and provides residual control of the annual broadleaf and grass weeds listed under General Information.

Add Princep 80W to the spray tank, mix thoroughly with Water, and then add paraguat and a nonionic surfactant. Provide constant agitation during mixing and application to keep the mixture in suspension.

Apply 2.5-3.75 lbs. of Princep 80W plus 1-2 pts. of paraguat* in 20-60 gals. of water per acre as a broadcast spray either before or after planting but before corn emerges. Add a nonionic surfactant at the rate of 0.5 pt. per 100 gals. of spray volume.

For further information, see general information, caution and warning statements, precautions, and notes on the Princep 80W and the paraguat labels.

*Based on a product containing 2 lbs, paraguat cation per gal.