

228-391

03/20/2002

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
228-391

Date of Issuance:
MAR 20 2002

NOTICE OF PESTICIDE:
 x Registration
 Reregistration

Term of Issuance:
Conditional

Name of Pesticide Product:
Riverdale Manor IVM
Selective Herbicide

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Riverdale Chemical Company
1333 Burr Ridge Parkway, Suite 125A
Burr Ridge, IL 60527-0866

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment.
 - a. Add the phrase "EPA Registration No. 228-381".
 - b. On page 4 and 5 the paragraphs "For tank mixes,...This is extremely important, as low rates of Manor IVM can kill or severely injure most crops (except small grains) must be moved to the General Information section.
 - c. On page 8 under your weed list the sentence "***Suppression which is a visual reduction in weed competition (reduced population or vigor)...performance" has no reference in the weed chart. Either mark the weeds referred to or delete the statement.
3. Submit three (3) copies of your final printed labeling before your release the product for shipment.

Signature of Approving Official:

Date:

3-20-02

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If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of labeling is enclosed for your records.

MANOR™ IVM SELECTIVE HERBICIDE

A Water Dispersible Granule

For use to control noxious and troublesome weeds on non-crop areas such as, Brush, Roadsides, Turf (unimproved), Government Installations, Industrial Sites and Utility Rights-Of-Way; also for Rangelands, Western Pastures and Forestry Use.

ACTIVE INGREDIENT:

Metsulfuron Methyl Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-amino]carbonyl]amino]sulfonyl]benzoate

60.0%

INERT INGREDIENTS:

40.0%

TOTAL 100.0%

RIVERDALE® AND MANOR™ ARE TRADEMARKS OF RIVERDALE CHEMICAL COMPANY

U.S. Patent 4,383,116

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE INSIDE BOOKLET FOR FIRST AID AND

ADDITIONAL PRECAUTIONARY STATEMENTS

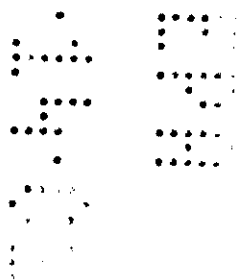
EPA REG. NO. 228-

NET CONTENTS OZS.

EPA Est. NO. 228-IL-1

MANUFACTURED BY
RIVERDALE CHEMICAL COMPANY
BURR RIDGE, ILLINOIS 60527-0866

ACCEPTED
MAR 20 2002
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 228-391



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

Causes eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt, long pants, shoes, and socks. 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 STATEMENTS:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the 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.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

FIRST AID STATEMENT

- IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 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 to 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.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. This herbicide is injurious to plants at extremely low concentrations. Nontarget plants may be adversely effected from drift and run-off. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irrigation system.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. READ ENTIRE LABEL BEFORE USING THIS PRODUCT. USE STRICTLY IN ACCORDANCE WITH LABEL PRECAUTIONARY STATEMENTS AND DIRECTIONS.

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.

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AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers 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 interval. 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 4 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, shoes and socks.

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 industrial weed control and selective weed control in turf (industrial, unimproved only) Rangelands and Pastures are not within the scope of the Worker Protection Standard.

Do not enter treated areas until spray have dried.

GENERAL INFORMATION

Manor™ IVM Selective Herbicide is a dispersible granule that is mixed in water and applied as a spray. MANOR™ IVM controls many annual and perennial weeds and woody plants in non-cro areas and conifer plantations.

Manor™ IVM may be used for general weed and brush control on industrial non-crop sites and for selective weed control in certain types of unimproved turf grasses on industrial sites and in native grasses. It can also be used for controlling and suppressing undesirable weeds and hardwoods in conifer plantations.

Manor™ IVM controls weeds and woody plants primarily by postemergent activity. Although Manor™ IVM has preemergence activity, best results are generally obtained when Manor™ IVM is applied to foliage after emergence or when Manor™ IVM is applied to foliage after emergence or dormancy break. Except where noted, Manor™ IVM provides the best results when applied to young, actively growing weeds. The use rate depends upon the weed species and size at the time of application.

The degree and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment
- soil pH, soil moisture, and soil organic matter

It is permissible to apply Manor™ IVM to floodplains where surface water is not present, terrestrial areas of deltas and low lying areas where water is drained but may be isolated in pockets due to uneven or unlevel conditions.

Manor™ IVM is non-corrosive, nonflammable, nonvolatile and does not freeze. Manor™ IVM should be used only in accordance with recommendations on this label or in separately published Riverdale recommendations.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

Manor™ IVM is absorbed primarily through the foliage of plants, and by the roots to a lesser degree. Plant cell division is generally inhibited in sensitive plants within a few hours following uptake. Two to 4 weeks after application, leaf growth slows followed by discoloration and tissue death. The final effect on annual weeds are evident about 4 to 6 weeks after application. The ultimate effect on perennial weeds and woody plants occurs in the growing season following application.

Warm, moist conditions following treatment promote the activity of MANOR™ IVM, while cold, dry conditions may reduce or delay activity. Weeds and brush hardened off by cold weather or drought stress may not be controlled. The use of a surfactant is recommended to enhance the control of susceptible plants, except where noted. Apply at a minimum rate (concentration) of 1/4% volume/volume (1 qt. per 100 gal. of spray solution), or at the manufacturer's recommended rate. Use only EPA approved surfactants containing at least 80% active ingredient. Certain types of surfactants, such as those incorporating acetic acid (i.e. LI-700), may not be compatible with MANOR™ IVM and may result in decreased performance. Certain surfactants may not be suitable for use on desirable plants, such as turf and conifers, listed on this label. Consult the surfactant manufacturer's label for appropriate uses. Weed and brush control may be reduced if rainfall occurs soon after application.

RESISTANCE

Biotypes of certain weeds listed on this label are resistant to Manor™ IVM and other herbicides with the same mode of action, even at exaggerated application rates. Biotypes are naturally occurring individuals of a species that are identical in appearance but have slightly different genetic compositions; the mode of action of a herbicide is the chemical interaction that interrupts a biological process necessary for plant growth and development.

If weed control is unsatisfactory, it may be necessary to retreat problem areas using a product with a different mode of action, such as postemergence broadleaf and/or grass herbicides.

If resistant weed biotypes such as kochia, prickly lettuce, and Russian thistle are suspected or known to be present use a tank mix partner with MANOR™ IVM to help control these biotypes, or use a planned herbicide rotation program where other residual broadleaf herbicides having different modes of action are used.

INTEGRATED PEST MANAGEMENT

To better manage weed resistance when using MANOR™ IVM, use a combination of tillage, and tank-mix partners or sequential herbicide applications that have a different mode of action than MANOR™ IVM, to control escaped weeds. Do not let weed escapes go to seed.

Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative herbicide recommendations available in your area.

It is advisable to keep accurate records of pesticides applied to treated areas to help obtain information on the spread and dispersal of resistant biotypes.

For tank mixes, use the most restrictive limitations from the labeling of the products being mixed. Use only those tank mix partners which are labeled for the appropriate use site. Do not apply more than 4 ounces of MANOR™ IVM per acre per year.

Do not use on food or feed crops except as recommended by this label or supplemental labeling.

Injury to or loss of desirable trees or other plants may result from failure to observe the following: Do not apply MANOR™ IVM Selective Herbicide (except as recommended), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawn, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water, including irrigation water. Keep from contact with fertilizers, insecticides, fungicides and seeds.

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Following a Manor™ IVM application, do not use sprayer for application to crops. This is extremely important, as low rates of MANOR™ IVM can kill or severely injure most crops (except small grains).

USE PRECAUTIONS

Injury to or loss of desirable tree or other plants may result from failure to observe the following.

If equipment is drained or flushed on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be wash or moved into contact with their roots.

Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to Manor™ IVM may injure or kill most crops. Injury may be more severe when the crops are irrigated.

Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials such as asphalt or concrete, or soils through which rainfall will not readily penetrate may result in runoff and movement of MANOR™ IVM. Do not treat frozen soil. Treated soil should be left undisturbed to reduce the potential for MANOR™ IVM movement by soil erosion due to wind or water.

Do not use on lawns, walks, driveways, tennis courts or similar areas.

Do not apply through any type of irrigation system.

Do not use the equipment used to mix or apply Manor™ IVM on crops (except pasture, range and wheat). The mixing and application equipment may be used for noncrop areas and conifer plantations only.

When used as directed, there is no grazing restriction for use rates of 1-2/3 ounce per acre and less. At use rates of 1-2/3 to 3-1/3 ounce per acre forage grasses may be cut for hay, fodder or green forage and fed to livestock, including lactating animals, 3 days after treatment.

Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos.

Do not use this product in California.

MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of Manor™ IVM.
3. Continue agitation until the MANOR™ IVM is fully dispersed, at least 5 minutes.
4. Once the Manor™ IVM is fully dispersed, maintain agitation and continue filling tank with water. Manor™ IVM should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Manor™ IVM spray preparations are stable if they are pH neutral or alkaline and stored at or below 100°F.
8. If Manor™ IVM and a tank mix partner are to be applied in multiple loads, pre-slurry the Manor™ IVM in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the Manor™ IVM.

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SPRAYER CLEANUP

Spray equipment must be cleaned before Manor™ IVM is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outline below.

TANK AND EQUIPMENT CLEANUP

When multiple loads of Manor™ IVM herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal. of household ammonia (contains 3% active) for every 100 gal. of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crops recommended on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given dispose of the rinsate on site or at an approved waste disposal facility.

* Equivalent amounts of an alternate-strength ammonia solution or a Riverdale-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or Riverdale representative for a listing of approved cleaners.

Notes:

1. Attention: Do not use chlorine bleach with ammonia, as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Stem-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When MANOR™ IVM is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.

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 **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.

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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 - The boom length should not exceed 3/4 of the wing or rotor length-longer booms increase drift potential.

Application Height - Application more than 10 ft. above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, 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 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 gusty or windless conditions.

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

TEMPERATURE AND HUMIDITY

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

TEMPERATURE INVERSIONS

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

WEEDS CONTROLLED

1/3 to 1/2 ounce per acre

Annual sowthistle	Common purslane	Maximillion sunflower
Aster	Common yarrow	Miners lettuce
Bahiagrass	Conical catchfly	Pennsylvania smartweed
Beebalm	Corn cockle	Plains coreopsis
Bittercress	Crown vetch	Plantain
Bitter sneezeweed	Dandelion	Redroot pigweed
Blackeyed-susan	Dogfennel	Redstem filaree
Blue mustard	False chamomile	Rough fleabane
Bur buttercup	Fiddleneck tarweed	Shepherd's purse
Chicory	Field pennycress	Silky crazyweed (locoweed)
Clover	Flixweed	Smallseal falseflax
Cocklebur	Goldenrod	Smooth pigweed
Common chickweed	Lambsquarters	Sweet clover
Common groundsel	Marestail	Tansymustard

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Treacle mustard
Tumble mustard
Wild carrot
Wild garlic
Wild lettuce
Wild mustard
Wooly croton
Wood sorrel (oxalis)
Yankeweed

1/2 to 1 ounce per acre

Blackberry	Dyer's woad	Plumeless thistle
Black henbane	Gorse	Prostrate knotweed
Broom snakeweed*	Halogeton	Rosering gaillardia
Buckhorn plantain	Henbit	Seaside arrowgrass
Common crupina	Honeysuckle	Sericea lespedeza
Common sunflower	Multiflora rose and other	Teasel
Curly dock	wild roses	Wild caraway
Dewberry	Musk thistle***	

1 to 2 ounces per acre

Bull thistle	Perennial pepperweed	Snowberry
Common mullein	Poison hemlock	St. Johnswort
Common tansy	Purple loosestrife	Western salsify
Field bindweed	Scotch thistle	Whitetop (hoary cress)
Gumweed	Scouringrush	
Houndstongue	Salsify	

1-1/2 to 2 ounces per acre

Canada thistle
Dalmation toadflax
Duncecap larkspur
Russian knapweed
Tall larkspur
Yellow toadflax

3 to 4 ounces per acre

Kudzu

*Apply fall through spring.

**Suppression, which is a visual reduction in weed competition (reduced population or vigor) as compared to untreated areas. Apply as a full coverage spray for best performance.

***Certain biotypes of musk thistle are more sensitive to MANOR™ IVM and may be controlled with rates of 1/4 to 1/2 ounce per acre. Treatments of MANOR™ IVM may be applied from rosette through bloom stages of development.

Tank Mix Combinations

For broader spectrum control and for use on certain biotypes of broadleaf weeds which may be resistant MANOR™ IVM and herbicides with the same mode of action, the following tank mixes are recommended.

Dicamba + 2,4-D

Combine 1/2 to 1 ounce of MANOR™ IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for the control of kochia.

Combine 1/2 ounce of MANOR™ IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for the suppression of rush knapweed.

Combine 1 ounce of MANOR™ IVM with 8 fluid ounces of dicamba and 16 fluid ounces of 2,4-D for

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the suppression of rush skeletonweed.

BRUSH CONTROL

Application Information

Manor™ IVM is recommended for the control of undesirable brush growing in non-crop areas. Applications may be made by air, high volume ground application, low volume ground application and ultra-low volume ground application. Except as noted for multiflora rose, Manor™ IVM should be applied as a spray to the foliage. The application volume required will vary with the height and density of the brush and the application equipment used. Generally, aerial applications will require 15 to 25 gallons of water per acre; high volume ground application will require 100 to 400 gallons of water per acre; low volume ground application will require 20 to 50 gallons of water per acre; and ultra-low volume ground application will require 1 to 20 gallons of water per acre.

Regardless of the application volume and equipment used, thorough coverage of the foliage is necessary to optimize results.

BRUSH SPECIES CONTROLLED		
Species	High Volume MANOR™ IVM Rate	Broadcast MANOR™ IVM Rate
Ash	1-2	1-3
Aspen	1-2	1-3
Black locust	1-2	1-3
Blackberry	1-2	1-3
Camelthorn	1-2	1-3
Cherry	1-2	1-3
Cottonwood	1-2	2-3
Eastern red cedar	1-2	2-3
Elder	1-2	2-3
Elm	1-2	1-3
Firs	3	1-2
Hawthorn	1-2	1-3
Honeysuckle	1-2	1/2-1
Mulberry	1-2	2-3
Multiflora rose	1-2	1-3
Muscadine (wild grape)	1-2	2-3
Oaks	1-2	1-3
Ocean spray (Holodiscus)	1-2	2-3
Osage orange	1-2	2-3
Red maple	1-2	2-3
Salmonberry	1/2-1	1-3
Snowberry	1/2-1	1-3
Spruce (black and white)	3	2-3
Thimbleberry	1/2-1	1-3
Tulip tree	1/2-1	1-3
Wild roses	1/2-1	1-3
Willow	1/2-1	1-3

For low volume and ultra-low volume ground applications, mix 4 to 8 ounces of MANOR™ IVM per 100 gallons of spray solution.

Application Timing

Make a foliar application for the recommended rate of MANOR™ IVM during the period from full leaf expansion in the spring until the development of full fall coloration on deciduous species to be controlled. Coniferous species may be treated at anytime during the growing season.

Tank Mix Combinations**Accord®**

After consulting the "Brush species Controlled" table, tank mix the prescribed rate of MANOR™ IVM with the rate of Accord indicated for the various application methods on the Accord label. Refer to the Accord label for list of species controlled.

Arsenal® Herbicide

Combine 1 to 2 ounces of MANOR™ IVM with 1 to 4 pints of Arsenal Herbicide per acre and apply as a broadcast spray. Aerial applications should use a minimum of 15 gallons per acre spray volume. In addition to species listed above controlled by MANOR™ IVM, this combination controls black gum, hophornbeam, sassafras, sweetgum, Vaccinium species, dogwood, myrtle dahoon, hickories, and persimmon.

Garlon® 3A or Garlon 4

After consulting the "Brush Special Controlled" table, tank mix the prescribed rate of MANOR™ IVM with the rate of Garlon indicated for the various application methods on the Garlon label. Refer to the Garlon label for list of species controlled.

Krenite® S

After consulting the "Brush Species Controlled" table, tank mix the prescribed rate of MANOR™ IVM with the rate of Krenite S indicated for the various application methods on the Krenite S label. Refer to the Krenite S label for list of species controlled.

Tordon® K*

After consulting the "Brush Species Controlled" table, tank mix the prescribed rate of MANOR™ IVM with the rate of Tordon K indicated for the various application methods on the Tordon K label. Refer to the Tordon K label for list of species controlled.

Tordon® K* + Arsenal Herbicide

Combine 1 to 1-1/2 ounce of Manor™ IVM with 2 to 8 fluid ounces of Arsenal and 1 to 2 pints of Tordon K per 100 gallons of water. Apply as a high volume spray. The tank mix controls cherry, elms, box elder, maples, hackberry, redbud, ash, oaks (including shingle oak), black locust and sassafras.

*Tordon K is a restricted use pesticide.

Spotgun Basal Soil Treatment

For control of multiflora rose, prepare a spray suspension of MANOR™ IVM by mixing 1 ounce per gallon of water. Mix vigorously until the Manor™ IVM is dispersed and agitate periodically while applying the spray suspension. Apply the spray preparation with an exact delivery handgun applicator. Apply at the rate of 4 milliliters for each 2 feet of rose canopy diameter. Direct the treatment to the soil within 2 feet of the stem union. When treating large plants and more than one delivery is required, make applications on opposite sides of the plant.

Applications should be made from early Spring to Summer.

IMPORTANT PRECAUTIONS**NON-CROP BRUSH ONLY**

When using tank mixtures of Manor™ IVM with companion herbicides, read and follow all use instructions, application rates, warnings and precautions appearing on the labels. Follow the most restrictive label instructions for each of the herbicides used.

Spray Equipment

Following an MANOR™ IVM application, do not use the sprayer or mixing equipment for application to agricultural crops, except that it may be used to treat pasture, range and wheat. This is extremely important as low rates of Manor™ IVM can kill or severely injure most agricultural crops.

The selected sprayer should be equipped with an agitation system to keep MANOR™ IVM suspended in the spray tank. Use a sufficient volume of water to thoroughly cover the foliage of undesirable weeds, generally 10 to 40 gallons per acre. Select a spray volume and delivery

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system that will deliver a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping to avoid injury to desired plants.

Refer to the brush control section of this label for information unique to that particular use.

TURF, INDUSTRIAL (UNIMPROVED ONLY)

Application Information

MANOR™ IVM is recommended for selective weed control in unimproved industrial turf where certain grasses are well established and desired as ground cover. MANOR™ IVM is also recommended for the control of certain noxious and troublesome weeds in turf. In addition to conventional spray equipment, MANOR™ IVM may also be applied with invert emulsion equipment. When using an invert emulsion, mix the prescribed rate of MANOR™ IVM in the water phase. Consult the "Weeds Controlled" table to determine which weeds will be controlled by the following recommendations.

Fescue and Bluegrass--

Apply 1/4 to 1/2 ounce of MANOR™ IVM per acre.

Crested Wheatgrass and Smooth Brome--

Apply 1/4 to 1 ounce of MANOR™ IVM per acre

Bermudagrass--

Apply 1/4 to 2 ounces of MANOR™ IVM per acre.

Application Timing

Applications may be made at anytime of the year, except when the soil is frozen.

When a Spring application is made on fescue or bluegrass, a second application may be made during the Summer after full seedhead maturation.

Growth Suppression and Seedhead Inhibition (Chemical Mowing)

Application Information

Manor™ IVM is recommended for growth suppression and seedhead inhibition in well established fescue and bluegrass turf at the use rate of 1/4 to 1/2 ounce per acre.

Tank Mix Combination

Manor™ IVM may be tank mixed with Embark for improved performance in the regulation of growth and seedhead suppression. Tank mix 1/4 to 1/2 ounce of MANOR™ IVM with 1/8 to 1/4 pint of Embark.

Application Timing

Application may be made after at least 2 to 3 inches of new growth has emerged until the appearance of the seed stalk.

When used as directed at rates up to and including of 3-1/3 oz. "Manor™ IVM" per acre, forage grasses may be grazed by livestock (if appropriate) or cut for hay, fodder or green forage and fed to livestock 3 days after treatment.

IMPORTANT PRECAUTIONS

-Industrial Turf Only

An application of Manor™ IVM may cause temporary discoloration (chlorosis) of the grasses. Use the lower recommended rates for minimum discoloration.

With fescue and bluegrass, sequential applications made during the same or consecutive growth periods (i.e. Spring and Fall) may result in excessive injury to turf.

Excessive injury may result when Manor™ IVM is applied to turf that is under stress from drought, insects, disease, cold temperatures (winter injury) or poor fertility.

Manor™ IVM is not recommended for use on Bahiagrass.

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NONCROP (INDUSTRIAL) SITES

Application Information

Manor™ IVM is recommended for use for general weed and brush control on non-crop, industrial sites such as airports, military installations, fence rows, roadsides and associated rights-of-way, petroleum tank farms, pipeline and utility rights-of-way, pumping stations, railroads, storage areas, plant sites and other similar areas including governmental and private lands. It is also recommended for the control of certain noxious and troublesome weeds.

Consult the "Weeds Controlled" and "Brush Species Controlled" tables to determine the appropriate application rate.

Manor™ IVM may be applied in tank mixture with other herbicides labeled for use on non-crop sites. Fully read the labels and follow all directions and restrictions on each label.

Application Timing

For best results, MANOR™ IVM should be applied postemergence to young, actively growing weeds.

Applications may be made at any time of the year, except when the ground is frozen.

To Control Black Locust

On noncrop sites, apply by ground as recommended above. Apply "Manor™ IVM" at the rate of 1 to 2 ounces per acre after the black locust has reached full leaf but before leaf tissue has hardened in the fall. Use a nonionic surfactant of at least 80% active ingredient at a minimum rate of 1 quart per 100 gallons of spray solution.

Control may not be satisfactory if the black locust is under stress at the time of treatment from drought or insects (i.e., locust leafminer).

GRASS REPLANT INTERVALS

Following an application of Manor™ IVM to non-crop areas, the treated sites may be replanted with various species of grasses at the intervals recommended below.

For soils with a pH of 7.5 or less observe the following replant intervals:

Species	MANOR™ IVM Rate oz/a	Replant Interval (months)
Brome, Meadow	1/2--1	2
	1-2	3
Brome, Smooth	1/2-1	2
	1--2	4
Fescue, Alta	1/2--1	2
	1-2	4
Fescue, Red	1/2--1	2
	1-2	4
Fescue, Sheep	1/2--1	1
	1-2	4
Foxtail, Meadow	1/2--1	2
	1-2	4
Green Needlegrass	1/2-2	1
Orchardgrass	1/2--1	2
	1-2	4
Russian wildrye	1/2	1
	1	2
	2	3

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Switchgrass	1/2--1 1-2	1 3
Timothy	1/2--1 1-2	2 4
Wheatgrass, Western	1/2--1 1-2	2 3

For soils with a pH of 7.5 or greater observe the following replant intervals:

Species	MANOR™ IVM Rate oz/a	Replant Interval (months)
Alkali Sacaton	1/2--1 1-2	1 3
Bluestem, Big	1/2--2	3
Brome, Mountain	1/2--1 1-2	1 2
Gramma, Blue	1/2--2	1
Gramma, Sideoats	1/2 >1/2	2 >3
Switchgrass	1/2 >1/2	2 >3
Wheatgrass, Thickspike	1/2--2	1
Wheatgrass, Western	1/2--1 1-2	2 3

The recommended intervals are for applications made in the Spring to early Summer. Because MANOR™ IVM degradation is slowed by cold or frozen soil, applications made the late summer or Fall should consider the intervals as beginning in the Spring following treatment. Testing has indicated that there is considerable variation in response among the species of grasses when seeded into areas treated with MANOR™ IVM. If species other than those listed above are to be planted into areas treated with MANOR™ IVM a field bioassay should be performed, or previous experience may be used, to determine the feasibility of replanting treated sites.

NATIVE GRASSES

Manor™ IVM is recommended for weed control and suppression in the establishment and maintenance of native grasses. It may be used where blue grama, bluestems (big, little, plains, sand, ww spar brome grass (meadow), buffalograss, green sprangletop, indiagrass, kleingrass, lovegrasses (atherstone, sand, weeping, wilman), orchardgrass, sideoats grama, switchgrass (blackwell), wheatgrass (bluebunch, intermediate, pubescent siberian, slender, streamband, tall, thickspike, western), and russian wildrye are established. It may also be applied over these species in the seedling stage, except for orchardgrass and russian wildrye.

Application Information

Apply Manor™ IVM at the rate of 1/10 ounce per acre for the control and suppression of bur buttercup (testiculate), common purslane, common sunflower, cutleaf eveningprimrose, flixweed, lambsquarters (common and slimleaf), maretail, pigweed (redroot and tumble), snow speedwell, tansymustard and tumble mustard (Jim Hill mustard).

Suppression is a visual reduction in weed competition (reduced population or vigor) as

compared to untreated areas. Degree of suppression will vary with the size of weed and environmental conditions following treatment.

Application Timing

For established grass, apply when weeds are in the seedling stage.

For grasses in the seedling stage, apply preplant or preemergence where the soil (seed bed) has been cultivated.

CONIFER PLANTATIONS**Application Information**

Manor™ IVM is recommended to control many species of weeds and deciduous trees on sites where conifers are growing or are to be planted. Apply by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" and "Brush Species Controlled" for a listing of susceptible species.

Application Timing

Apply Manor™ IVM after weeds have emerged or after undesirable hardwoods have broken winter dormancy and have reached the point of full leaf expansion.

Conifer Site Preparation**-Application Before Transplanting**

After consulting the "Weeds Controlled" and "Brush Species Controlled" tables apply the rates of Manor™ IVM recommended for the most difficult to control species on the site

Southeast - Apply up to 4 oz. Per acre for loblolly and slash. Transplant the following planting season.

Northeast and Lake States - Apply up to 2 oz per acre for red pine. Transplant the following planting season.

West - Apply up to 2 oz. Per acre for Douglas fir in the Coast Range and western slope. Transplant at least 90 days after treatment.

Tank Mix Combinations

For broader spectrum control the following products are recommended in combination with Manor™ IVM.

Accord®

Tank mix 1 to 2 ounces of Manor™ IVM with 2 to 10 quarts of Accord per acre. Refer to the product container for a list of species controlled.

Arsenal® Applicator's Concentrate

Tank mix 1 to 2 ounces of Manor™ IVM with 10 to 24 fluid ounces of Arsenal Applicator's Concentrate per acre. Loblolly and slash pines may be transplanted the planting season following application. The combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, persimmon, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, and red maple.

Accord® + Arsenal® Applicators Concentrate

Tank mix 1/2 to 1 ounce of Manor™ IVM with 16 to 64 Fluid ounces of Accord and 10 to 12 fluid ounces of Arsenal Applicators Concentrate per acre. Slash and loblolly pines may be transplanted the planting season following application. The combination controls cherry, dogwood, elms, oaks (red and water), persimmon, sassafras, sweetgum and suppresses hickory.

Velpar® L or Velpar® DF

Tank mix 1 to 2 ounces of MANOR™ IVM per acre with Velpar L or Velpar DF at the rates recommended on the container for various soil textures. Loblolly and slash pines may be transplanted the planting season following application. Refer to the product container for a list of species controlled.

Oust®

Tank mix 1/2 to 1-1/2 ounces of MANOR™ IVM with 2 to 3 ounces of Oust per acre for herbaceous weed control. Refer to the product container and the "Weeds Controlled" section of this label for a listing of the weeds controlled. Loblolly and slash pines may be transplanted the planting season following application.

Tank mix 2 ounces of Manor™ IVM with 3 ounces of Oust per acre for herbaceous weed control and early spring suppression of bull thistle and Canada thistle in the Coast Range and western slope of the Cascade Mountains. Douglas fir may be transplanted at least 90 days following application.

Release**-Hardwood Control and Suppression**

Manor™ IVM is recommended for application over the top of established slash and loblolly pine to control the species listed in "Weeds Controlled" and "Brush Species Controlled" section of this label. Apply 1 to 4 ounces per acre to control the species indicated, including kudzu.

Tank Mix Combinations-

For broader spectrum control the following products are recommended in combination with Manor™ IVM.

Arsenal® Applicator's Concentrate

Tank mix 1 to 2 ounces of Manor™ IVM with 8 to 16 fluid ounces of Arsenal Applicator's Concentrate per acre may be applied to loblolly pine. Refer to the Arsenal Applicator's Concentrate label regarding the use of surfactants and the appropriate application timing with respect the age and development stage of the pines. The combination controls ash, black gum, cherry, hawthorn, honeysuckle, hophornbeam, oaks (red, white and water), sassafras, sweetgum, Vaccinium species, and suppresses blackberry, dogwood, elms, myrtle dahoon, hickories, persimmon, and red maple.

Velpar® L or Velpar® DF

Tank 1 to 2 ounces of MANOR™ IVM with Velpar L or Velpar DF at the rates recommended on the container for various soil textures. The combination may be applied to loblolly and slash pines.

Release**-Herbaceous Weed Control**

Manor™ IVM may be applied to transplanted loblolly and slash pine for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and recommended application rates. Best results are obtained when Manor™ IVM is applied just before weed emergence until shortly after weed emergence.

Tank Mix Combinations--

For broader spectrum control the following products are recommended in combination with Manor™ IVM.

Arsenal® Applicators Concentrate

Tank mix 1/2 to 1 ounce of Manor™ IVM with 4 fluid ounces of Arsenal Applicators Concentrate per acre. The tank mix may be used on loblolly pine.

Oust®

Tank mix 1/2 to 1-1/2 ounces of Manor™ IVM with 2 to 3 ounces of Oust per acre. Best results are obtained when Manor™ IVM is applied just before weed emergence until shortly after weed emergence. The tank mix may be used on loblolly and slash pine.

Velpar® L or Velpar® DF

Tank mix 1/2 to 1 ounce of Manor™ IVM with Velpar L or Velpar DF at the rates recommended on the container for various soil textures. The combination may be applied to loblolly and slash pines.

Important Precautions**-Conifer plantations Only**

- Applications of Manor™ IVM made to conifers that are suffering from loss of vigor caused by insects, diseases, drought, winter damage, animal damage, excessive soil moisture, planting shock, or other stresses may injure or kill the trees.
- Applications of Manor™ IVM made for herbaceous release should only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Do not apply Manor™ IVM to conifers grown as ornamentals.

- Manor™ IVM applications may result in damage and mortality to other species of conifers when they are present on sites with those listed in the preceding recommendations for conifer plantations.

Riverdale® Manor™ IVM Selective Herbicide is recommended for weeds in conifer plantations. When used as directed, forage grasses may be utilized as follows:

1. For all rates, do not use on grasses grown for seed.
2. At rates up to 3-1/3 oz Manor™ IVM per acre, grasses may be cut for hay, fodder or green forage and fed to livestock 3 days after treatment; however, at rates of 1-2/3 oz per acre or less, there is no grazing restrictions.
3. For combinations, use the most restrictive recommendation of products used.

SLASH PINE PLANTATIONS

Site Preparation

Riverdale Manor™ IVM Selective Herbicide is recommended for site preparation to control blackberry and other vegetation where plantations of slash pine will be transplanted the following season.

ACRE	WEEDS/BRUSH	OUNCES "MANOR™ IVM" PER
	Blackberry	1/2 to 1-1/2
	Black cherry Black locust Diffuse knapweed Japanese honeysuckle Palmetto	3-1/3

Application Information

Apply "MANOR™ IVM" in a minimum of 10 gals water per acre by helicopter or ground sprayer; add surfactant at 0.25% by volume (1qt, per 100 gals water). Treat perennial weeds and brush after they have reached full leaf, but before leaf tissue has hardened. Use sufficient spray volume for complete coverage of these plants.

Apply as a full coverage spray to foliage and stems. Total spray volume per acre will depend upon plant height and density of growth, and the type of equipment used.

Effectiveness may be reduced if rainfall occurs within 24 hours after application.

Slash pine may be transplanted the next season, at least 6 months after application of "MANOR™ IVM".

For broader spectrum control, "MANOR™ IVM" should be tank-mixed with "Velpar" Herbicide or Roundup or Arsenal. For aerial application of combinations, follow directions on the package label of the companion product in addition to "MANOR™ IVM" directions above; see labels for additional plants controlled..

NOTE:

Poor weed and brush control may occur from application made when the soil is saturated with water and rain is imminent within 24 hours.

Do not use on poorly drained or marshy sites.

Do not apply by air within 200 feet of any homestead, agricultural land or other desirable plantings, agricultural land or any body of water. Do not apply when weather conditions favor drift from treated areas.

For Control Of Black Locust

On slash pine plantations for site preparation only, ground or aerial application may be used as recommended on this label. Apply "MANOR™ IVM" at the rate of 1 to 2 ounces per acre after the black locust has reached full leaf but before leaf tissue has hardened in the fall. Use

a nonionic surfactant of at least 80% active ingredient at a minimum rate of 1 quart per 100 gallons of spray solution.

Control may not be satisfactory if the black locust is under stress at the time of treatment from drought or insects (i.e., locust leafminer).

LOBLOLLY PINE PLANTATIONS

Site Preparation For Control of Black Locust

See Information Under "Slash Pine Plantations" For Control Of Kudzu In Listed States. Riverdale Manor™ IVM Selective Herbicide is recommended where loblolly pine is to be planted or has been established for at least 1 year on sites infested with kudzu in AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, TX, and WV.

Apply 4 ounces "Manor™ IVM" per acre; add a nonionic surfactant (80% active) at 1 qt/100 gals spray mix. Apply after full foliation of kudzu. Application should be made with sufficient volume to thoroughly wet the kudzu canopy from top to bottom with crossing passes of 45 to 90 degrees. A minimum of 30 gals water per acre per pass by ground equipment should be used, totaling 60 gal per acre.

Retreatment may be necessary. Retreat the area one year after the initial treatment. Broadcast application should be utilized if resprouting of kudzu root-crowns are less than 20 feet apart. If root-crowns are greater than 20 feet, spot application may be utilized. Failure to treat escaped or border patches of kudzu will result in reinvasion over the entire treated area in subsequent years.

Note:

1. Do not apply where conifers are suffering from loss of vigor caused by insects, disease, drought, winter damage, or other stresses, as injury may result.
2. Use on coarse textured, gravelly or rocky soils or exposed subsoils may result in conifer injury.
3. Do not use on poorly drained or marshy sites; however, pine on raised beds may be treated.
4. Temporary distortion of tip growth of pine may occur.

Tank Mix with Velpar® L For Selective Weed Control For Listed States

Riverdale Manor™ IVM Selective Herbicide, alone or tank-mixed with "Velpar" L (or "Velpar"), is recommended for control of brush and weeds in established plantations of loblolly pine at least 1 year old in AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, TX and WV.

In addition to brush species listed on "Velpar" L labeling, the combination controls or improves control of blackberry, black gum, elm, winged elm, and cherry. Additionally, the combination controls many weeds as shown on product labels.

Apply 1.5 oz "MANOR™ IVM" in 5 to 30 gals per acre. For broader spectrum control, tank mix with "Velpar" L (or "Velpar") at rates recommended on container labels. The combination should be applied during late Spring to early Summer.

Apply by helicopter as described on the "Velpar" L container label. Application may also be applied by ground spray equipment.

NOTE:

1. Do not apply where conifers are suffering from loss of vigor caused by insects, disease, drought, winter damage, or other stresses, as injury may result.
2. Do not add surfactant to tank mixes containing "Velpar" or "Velpar" L.
3. Use on coarse textured, gravelly or rocky soils or exposed subsoils may result in conifer injury.
4. Poor weed and brush control may occur from application made when the soil is saturated with water and rain is imminent within 24 hours.
5. Do not use on poorly drained or marshy sites.
6. Temporary distortion of tip growth of pine may occur.

7. Do not apply by air within 200 feet of any homestead, agricultural land or other desirable plantings, agricultural land or any body of water. Do not apply when weather conditions favor drift from treated areas.

Hardwood Plantations**Application Information**

Manor™ IVM is recommended to control many species of weeds on sites where yellow poplar is growing or is to be planted. Apply by ground equipment or by air (helicopter only). Refer to the "Weeds Controlled" sections of this label for a listing of susceptible species.

Application Timing

Manor™ IVM may be applied over the top of planted seedlings after the soil has settled around the root systems but before the seedlings have broken dormancy (bud break).

Release**-Herbaceous Weed Control**

Manor™ IVM may be applied to yellow poplar for the control of herbaceous competition. Consult the "Weeds Controlled" for a listing of the susceptible species and recommended application rates. Best results are obtained when Manor™ IVM is applied just before weed emergence until shortly after weed emergence.

Tank Mix Combinations--

Tank mix 1/2 ounce of Manor™ IVM with 4 to 6 pints of Velpar L as recommended on the package label for "Release-Herbaceous Weed Control" in pine plantations in the eastern U.S. Follow the Velpar L label recommendations regarding altering the application rate by soil texture.

Important Precautions**-Hardwood Plantations Only**

Application of Velpar L and Manor™ IVM made to yellow poplar that are suffering from loss of vigor caused by insects, disease, drought, winter damage, animal damage, excessive soil moisture, planting shock or other stresses may injure or kill the seedlings.

Applications of Manor™ IVM made for release should only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting. The use of surfactant is not recommended for applications made over the tops of trees. Careful consideration must be given by an experienced and knowledgeable forester to match the requirements of yellow poplar to the conditions of the site. Treatment of yellow poplar planted on a site inadequate to meet its requirements may injure or kill the seedlings.

RANGELAND**For Control of Musk thistle (biennial)**

Apply 1/2 oz "MANOR™ IVM" per acre at rosette, bolt and bud stages to control existing plants and to inhibit seed production. Include a nonionic surfactant at least 80% active ingredient to improve wetting and/or contact activity. Use at 1/4 to 1/2% V/V or 1 to 2 quarts per 100 gallons of water.

Apply "MANOR™ IVM" by ground sprayer only.

For Selective Weed Control

Riverdale Manor™ IVM Selective Herbicide is recommended for control of weeds in rangeland. See instructions under "Weed Control".

When used as directed on Rangelands, forage grasses may be utilized as follows:

1. For all rates, do not use on grasses grown for seed.
2. At rates up to 3-1/3 oz "MANOR™ IVM" per acre, grasses may be cut for hay, fodder or green forage and fed to livestock 3 days after treatment; however, at rates of 1-2/3 oz per acre or less, there is no grazing restriction.
3. For combinations, use the most restrictive recommendation of products used.

APPLICATION AS A SPOT TREATMENT TECHNIQUE IN RANGE AND NONCROP AREAS

Riverdale Manor™ IVM Selective Herbicide is recommended for use as spot treatment to control noxious and troublesome weeds on rangeland, noncrop areas such as roadsides and industrial sites including government and private lands.

Application Information

Riverdale Manor™ IVM Selective Herbicide is recommended to control many species of weeds, including noxious and troublesome weeds, in certain established grasses growing on noncrop areas also forage grasses growing on range land. Refer to the "Weeds Controlled" section of this label.

If the sprayer is calibrated, consult the package label or other supplemental labeling to select the application rate per acre of Manor™ IVM for the target weeds.

OR

Use the measuring guide enclosed with the MANOR™ IVM 1 ounce container to mix one gram of MANOR™ IVM per one gallon of water along with a suitable surfactant. Spray to the point of wetting the entire surface of the target weeds, approximately 40 gallons of solution per acre.

When applied in this manner there is no grazing restriction following the use of MANOR™ IVM.

Application Timing

Applications may be made at anytime of the year, except when the soil is frozen.

USE PRECAUTIONS

Varieties and species of grasses differ in their tolerance to herbicides. When using MANOR™ IVM on a particular grass for the first time, limit use to a single 1 ounce container. If no injury occurs throughout the season larger acreage may be treated.

Applications made to some established grasses may cause temporary stunting, yellowing or seedhead suppression (i.e. fescue, timothy).

Applications made to newly established grasses less than 2 years from seeding may result in injury or loss.

Do not apply to forage grasses known to be sensitive to MANOR™ IVM such as ryegrass (Italian and perennial), Bahia or Garrison's creeping foxtail.

Broadleaf forage species, such as alfalfa and clover, are highly sensitive to MANOR™ IVM and will be severely injured or killed.

When used as directed, there is no grazing restriction for use rates of 1-2/3 ounce per acre and less. At use rates of 1-2/3 to 3-1/3 ounce per acre forage grasses may be cut for hay, fodder or green forage and fed to livestock, including lactating animals, 3 days after treatment.

**AERIAL APPLICATION ON UTILITY RIGHTS-OF-WAY,
MILITARY INSTALLATIONS, RANGELAND AND PASTURES WESTERN US**

Riverdale Manor™ IVM Selective Herbicide is recommended for control of noxious and troublesome species of weeds and brush on utility and pipeline rights-of-way, military installations, rangeland and pastures in the western US by aerial (helicopter and fixed wing) application.

Applications may be made in the states of AZ, CO, HI, ID, KS, MT, NE, ND, UT, WA, and WY. When used as directed forage grasses may be cut for hay, fodder or green forage and fed to livestock 3 days after treatment at rates up to 3-1/3 ounce per acre. At rates of 1-2/3 ounces per acre and less, there is no grazing restriction.

Application Information

Refer to "Spray Drift Management" section of this label.

Apply with helicopter or fixed wing aircraft fitted with application equipment designed to deliver droplets of uniform size and to prevent drift. Mix tanks or nurse tanks should be equipped with an agitation system capable of keeping the MANOR™ IVM thoroughly mixed during the application. If the spray preparation is left standing, thoroughly agitate before using.

The use of a non-ionic surfactant of at least 80% active ingredient at a minimum rate of 1 qt/100 gal. of spray solution is necessary for acceptable performance. Apply the finished solution at rates between 5 and 25 gal/acre.

Apply a minimum of 5 gallons of solution per acre when application rates of greater than 1/2 ounce of MANOR™ IVM per acre are used. A minimum of 2 gallons of solution per acre may be used when application rates of 1/2 ounce of MANOR™ IVM per acre and less are used. Use the lower volumes when applications are made with fixed wing aircraft or when the target vegetation is small or sparse. Use the higher volumes when applications are made with a helicopter (10 to 25 gal/acre) or when the target vegetation is tall, dense or forms multiple canopies (strata) of foliage. Thorough coverage of the target plant's foliage is necessary to obtain adequate control.

STORAGE AND DISPOSAL

STORAGE: Always use original container to store pesticides in a secured warehouse or storage building. Do not store near open containers of fertilizers, seeds, or other pesticides. Do not contaminate water, food or feed by storage or disposal.

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

CONTAINER DISPOSAL: Triple rinse (or equivalent), adding rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration, or by burning, if allowed by State and local authorities. If burned, stay out of smoke.

WARRANTY

Riverdale warrants that this herbicide conforms to the chemical description on its label. When used in accordance with label directions under normal conditions, this herbicide is reasonably fit for its intended purposes. Since timing, method of application, weather, plant and soil conditions, mixtures with other chemicals, and factors affecting the use of this product are beyond our control, no warranty is given concerning the use of this product contrary to label directions or under conditions which are abnormal or not reasonably foreseeable. The user assumes all risks of any such use.

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