



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

January 13, 2020

Ogongi Ogongi
Agent for Rotam Agrochemical Company, Ltd.
c/o Wagner Regulatory Associates, Inc.
P.O. Box 640
Hockessin, DE 19707

Subject: Notification per PRN 98-10 – Add table of contents, referral and trademark statements to label
Product Name: Dictator
EPA Registration Number: 83100-34
Application Date: November 13, 2019
Decision Number: 558057

Dear Mr. Ogongi:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, please contact Theresa Gerber at 703-347-8583 or by email at gerber.theresa@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Emily Schmid".

Emily Schmid, Product Manager 25
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

[MASTER Label]

Dicamba	GROUP	4	HERBICIDE
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DICTATOR (ABN: TOPEKA)

FOR WEED CONTROL IN CORN, SORGHUM, SMALL GRAINS (WHEAT, BARLEY AND OATS NOT UNDERSEED TO LEGUMES), PASTURE, HAY, RANGELAND, FARMSTEAD (NON-CROPLAND), FALLOW, SUGARCANE, ASPARAGUS, TURF AND GRASS SEED CROPS.

ACTIVE INGREDIENT:	By Wt.
Dimethylamine Salt of Dicamba (3,6-dichloro- <i>o</i> -anisic acid)*	48.2%
OTHER INGREDIENTS:	51.8%
TOTAL:	100.0%

*This product contains 40.0% 3,6-dichloro-*o*-anisic acid (Dicamba) or 4 pounds per gallon (480 g/L)

NOTIFICATION

83100-34

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

1/13/2020

KEEP OUT OF REACH OF CHILDREN CAUTION / PRECAUCION

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

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal), call: 1-800-222-1222 . For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), call CHEMTREC: 1-800-424-9300 .	
NOTE TO PHYSICIAN	
Probable mucosal damage may contraindicate the use of gastric lavage.	

[\[See additional \[First Aid\], Precautionary Statements and Directions for Use inside booklet\]](#)

Manufactured [By] [For]:
Rotam Agrochemical Co. Ltd.
26/F, E-Trade Plaza
24 Lee Chung Street
Chai Wan, Hong Kong

EPA Reg. No.: 83100-34
EPA Est. No.:

Net Contents: _____ [\[Gals./Liters\]](#)

[\[Note to EPA Reviewer: Table of Contents to be added before Precautionary Statement\]](#)

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION / PRECAUCION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils (except for applicators using ground boom equipment, pilots and flaggers)

See Engineering Controls for additional requirements and exceptions.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENT: 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. Pilots must use cockpits in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)].

USER SAFETY RECOMMENDATIONS

Users Should:

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

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Apply this product only as directed on the label.

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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry 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 24 hours.

The following PPE is required for early entry into 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:

- Coveralls over short sleeved shirt and short pants
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥14 mils, natural rubber ≥14 mils, polyethylene, polyvinyl chloride (PVC) ≥14 mils, or Viton® ≥14 mils
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear if overhead exposure

- Protective eyewear

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.

Do not enter or allow others to enter until sprays have dried.

All directions and precautions on the product labeling (container and package) should be read before applying Topeka (dicamba). Failure to do so could result in illegal residues, crop injury or unsatisfactory weed control.

WEED RESISTANCE MANAGEMENT

Topeka contains the active ingredient dicamba. Dicamba is classified as a Group 4 herbicide (benzoic acid chemical family) and is a synthetic auxin.

Herbicide resistance is defined as the inherited ability of a plant to survive and reproduce following exposure to a dose of herbicide normally lethal to the wild type. In a plant, resistance may be naturally occurring or induced by such techniques as genetic engineering or selection of variants produced by tissue culture or mutagenesis. Any weed population may contain or develop plants that are naturally resistant to Topeka and other Group 4 herbicides. Weed species with acquired resistance to Group 4 herbicides may eventually dominate the weed population if Group 4 herbicides are used repeatedly in the same field or in successive years as the primary method of control for targeted species. This may result in partial or total loss of control of those species by Topeka or other Group 4 herbicides.

Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same species. If resistance is suspected, prevent weed seed production in the affected area by an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed. If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different mode of action, if available.

To delay herbicide resistance, consider:

- Avoiding the consecutive use of Topeka or other target site of action Group 4 herbicides that have a similar target site of action, on the same weed species.
- Using tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action, and are both effective at the tank mix or prepack rate on the weed(s) of concern.
- Basing herbicide use on a comprehensive Integrated Pest Management (IPM) program.
- Monitoring treated weed populations for loss of field efficacy.

Users should scout before and after application. Users should report lack of performance to registrant or their representative.

Contact your local sales representative, extension agent, or certified crop advisors to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective mechanisms of action for each target weed.

INTEGRATED WEED PEST MANAGEMENT

Integrate Topeka into an overall weed management strategy whenever the use of an herbicide is required. Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

PRODUCT INFORMATION

Mixing and Application

Topeka is a water-soluble herbicide that can be diluted and applied in water or a sprayable fluid fertilizer carrier. The user should carry out a compatibility test prior to tank mixing when using a fluid fertilizer carrier.

The following mixing and application directions apply to all uses of this product (crop and non-crop), unless otherwise specified in the individual use headings found on the label. Individual use sections provide additional restrictions and precautions specific to the crop or use, as well as application rates and timing specific to the individual uses.

Applicator can use ground or aerial application equipment with Topeka, as long as application equipment gives good spray coverage of weed foliage. HOWEVER, DO NOT APPLY BY AIR IF TEMPERATURE INVERSIONS EXIST OR WIND IS BLOWING TOWARD AREAS WHERE SENSITIVE PLANTS OR CROPS ARE GROWING.

Application equipment should be calibrated for coarse spray, and nozzles that are designed to produce minimal amounts of fine spray particles should be selected. For good weed coverage, application should be made with nozzles as close as practically possible to the weeds. Application should not be made when wind speed is greater than 15 mph or during periods of gusty wind, to avoid uneven spray coverage. Treated areas should remain undisturbed (i.e., avoid cultivation or moving) for at least 7 days following application.

- Ground Application: Apply 3 to 50 gallons of diluted spray per treated acre.
- Aerial Application: Apply 1 to 10 gallons of diluted spray per treated acre.
- Aerial Application, Pre-Harvest Uses: Apply 2 to 20 gallons of diluted spray per treated acre.

If vegetation is dense or tall, higher specified amount of spray volume should be used.

Restrictions:

- Do not apply more than the maximum rate of 1 lb. Topeka a.i. per acre per application.
- Do not make more than 2 applications of Topeka per year.
- Topeka cannot be applied through any type of irrigation system.
- Topeka cannot be used to treat irrigation ditches or water used for domestic uses or crop irrigation.
- DO NOT use this product on GMO dicamba tolerant crops.

Best Stewardship Practices

When properly applied, Topeka provides effective control of broadleaf weeds and brush. Utilizing best stewardship practices in all aspects of Topeka use (including application operations, mixing, and loading) will minimize off-target movement and protect surface and ground waters as well as maximize weed control.

As a result of agricultural use, Topeka (dicamba), under certain conditions, is known to leach through soil into groundwater. Groundwater contamination may result if Topeka is used in areas where soils are permeable, particularly where the water table is shallow.

Ground and Surface Waters Protection

1) Point Source Contamination

- Do not mix or load Topeka within 50 feet of wells (including drainage wells and abandoned wells), perennial or intermittent streams and rivers, sink holes, and natural or impounded lakes and reservoirs, to prevent point source pollution.
- Do not make application of Topeka within 50 feet of wells. Exceptions to this setback:
 - Impervious pad or properly diked mixing/loading areas (see description, below)
 - Properly plugged or capped abandoned wells
- Operations performed with Topeka within 50 feet of a well (mixing, loading, rinsing, washing) are only allowed if conducted on an impervious pad. Impervious pad must:
 - Be constructed to withstand heaviest load on or moving across pad
 - Be self-contained, so that surface water flow over or from the pad is prevented
 - Have a volume capacity of 110% of largest pesticide or application container used on the pad
 - Have a capacity to contain all product spills as well as vehicles or equipment delivering pesticides to mixing/loading site
- Additional requirements regarding wellhead setbacks and operational containment may be in effect in your State.
- Antisiphoning devices or check valves must be used on all mixing equipment, and care must be taken when using Topeka to prevent spills, back siphoning into wells or improper disposal of excess pesticide, spray mixtures or rinsates.

2) Movement by water erosion of treated soil

- Topeka is not to be applied or incorporated through any type of irrigation equipment (including flood or furrow irrigation).
- Before using tailwater for subsequent irrigation of other fields, ensure that treated areas have received at least one half inch rainfall (or irrigation).

3) Movement by surface runoff or through soil

- Topeka is not to be applied under conditions that favor runoff.
- In areas with high potential for groundwater contamination, Topeka is not to be applied to paved or highly compacted surfaces or other impervious substrates.

- Where groundwater depth is shallow, Topeka is not to be applied to sandy soils with less than 3% organic matter (in areas where groundwater is near the surface, and soils are permeable or coarse, groundwater contamination may occur).
- Application rate recommendations as affected by soil type (in individual use headings sections) should be carefully followed to minimize the possibility of groundwater contamination.

Sensitive Crop Precaution

When Topeka contacts roots and stems of sensitive or desirable foliage, desirable trees and plants (particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans sunflowers, tobacco, tomatoes and other broadleaf plants) can sustain injury. Plants are particularly susceptible to injury during their growth stage. Follow the precautions below to minimize damage to desirable or sensitive plants:

- Coarse sprays should be used to avoid potential herbicide drift. Nozzles (such as Delevan Raindrops; Spraying Systems XR flat fans; D10, TK10, or larger capacity flood nozzles) designed to produce minimal amounts of fine spray particles should be selected. Consult with spray nozzle supplier regarding possible choices of drift reducing nozzles. Unless otherwise specified/required by manufacturer of spray nozzles, spray volume should be at or above 20 gpa and spray pressure should be at or below 20 PSI.
- Application of Topeka should be avoided if temperature inversions exist or if air currents can carry spray particles to areas where sensitive plants or crops are growing. If wind speed is greater than 5 mph and is moving in the direction of adjacent sensitive crops, or if wind is gusty, do not spray near sensitive plants. An adequate buffer zone should be maintained between sensitive plants and areas to be treated.
- If surface washing or possible downward movement in to the soil may cause Topeka to contact roots of desirable plants (such as trees and shrubs), do not treat in these areas.
- Drift reducing additives (agriculturally approved) may be used to mitigate drift.
- If temperature on the day of application is expected to exceed 85°F, do not apply Topeka adjacent to sensitive crops, as drift is more likely to occur.
- Equipment used to apply Topeka should be thoroughly cleaned (see procedure for **Cleaning Spray Equipment**) before reusing to apply other chemicals, to avoid injury to desirable plants.

If normal harvest of treated crops has occurred, there are no crop rotation restrictions.

All agricultural (crop) uses of Topeka are designed for a regular growing interval between planting and harvest. Do not follow up with planting a sensitive crop if interval is shortened (f. ex., cover crops that will be plowed under). Crops under stress (such as drought, seedling disease, high soil pH or salt content, foliar damage due to insects, wind or hail) can display injury symptoms that can be more noticeable upon application of herbicides.

Local and State authorities should be consulted for advice concerning application of Topeka, any special local use situations, and any possible application restrictions. Tank mixes (including those recommended in individual use sections of this label) can only be used in states where tank mix partners and application sites are registered.

Band Treatments

When Topeka is applied as a band treatment, the following formulas should be used to calculate the correct rate and volume per acre:

$$\text{Band RATE} \\ \text{Per treated area} = \text{Broadcast RATE} \\ \text{per treated acre} \times \left(\frac{\text{Band width} \\ \text{in inches}}{\text{Row width} \\ \text{in inches}} \right)$$

$$\text{Band VOLUME} \\ \text{Per treated area} = \text{Broadcast VOLUME} \\ \text{per treated acre} \times \left(\frac{\text{Band width} \\ \text{in inches}}{\text{Row width} \\ \text{in inches}} \right)$$

Compatibility Test

The compatibility of mixtures should be tested before mixing in a spray tank, by combining all components in proportionate quantities in a small container.

When diluting herbicide in a spray carrier, or mixing multiple herbicides in a tank mix, assuming a spray volume of 25 gallons per acre, mix 1 ½ level teaspoons of a dry herbicide formulation (assuming a 1 lb. per acre rate) or ½ level teaspoon of a liquid herbicide formulation (assuming a 1 pint per acre rate) in one pint of spray mix. (**NOTE:** Adjust rate of herbicide formulation accordingly if specified rate per acre is lower or higher than indicated.)

Spray mix is compatible if herbicides do not ball up, form precipitates (such as flakes or sludge), gel, or form oily films or layers. Incompatibility will typically occur within 5 minutes of blending.

If spray mix is incompatible, a compatibility agent is recommended. Assuming a mixing rate for the compatibility agent of 2 pints per 100 gallons of fluid fertilizer or spray mix, add ¼ teaspoon of compatibility agent to the herbicide and spray solution. (**NOTE:** Adjust level of compatibility agent accordingly if specified amount is higher or lower than 2 pints per 100 gallons spray mix.)

Cleaning Spray Equipment

These steps are recommended for thoroughly cleaning spray equipment after applications of herbicides:

- 1) Fill spray tank half full with water, while thoroughly hosing down the inside and outside surfaces of equipment. Operate sprayer until all rinse water has been purged from the system.
- 2) To the spray tank, add household ammonia (at the rate 1 quart of ammonia for every 25 gallons of water), and fill tank with water. Circulate ammonia solution through the sprayer system for 15-20 minutes by operating the sprayer system's pump. To clean the nozzles and boom, a small amount of the ammonia solution should be discharged. Once ammonia has circulated through the spray system, solution should be allowed to stand for several hours, preferably overnight.
- 3) Ammonia solution should be flushed from the spray tank through the boom.
- 4) Nozzles and screens should be removed, and system should be flushed with two full tanks of water.

If this product has been tank mixed with water-dispersible formulations (such as emulsifiable concentrates (EC), wettable powders (WP), etc.), use the steps below for cleaning the spray equipment (as tank mixes with water dispersible formulations require the use of a water/detergent rinse):

- 5) Complete Step 1, above.
- 6) To the spray tank, add detergent (at the rate of 2 lbs. detergent for every 40 gallons of water), and fill tank with water. Circulate detergent solution through the sprayer system for 5 to 10 minutes by operating the sprayer system's pump. To clean nozzles and boom, a small amount of the detergent solution should be discharged. Once detergent has circulated through the spray system, solution should be allowed to stand for several hours, preferably overnight.
- 7) Detergent solution should be flushed from the spray tank through the boom.
- 8) Repeat step 1, above and follow with a complete ammonia rinse (steps 2, 3, and 4, above).

WEED LIST

The weeds listed below may be treated with Topeka. Follow label directions, rates, timings and recommendations under specific crop sections of this label. Growth suppression or control of broadleaf (annual, biennial and perennial) weeds and brush (woody) and vine species.

BROADLEAF WEED LIST

*Alfalfa ³	Goldenrod, Canada and Missouri ³	Ragweed, western ³
Amaranth, spiny (Spiny Pigweed) ¹	Goldenweed, common ³	Ragwort, tansy ²
Artichoke, Jerusalem ³	Goosefoot, nettleleaf ¹	Redvine ³
Aster, slender ¹	Gromwell ²	Sericia lespedeza ³
Aster, spiny and whiteheath ³	Hawkweed ³	Sesbania, hemp ¹
Bedstraw ¹	Henbane, black ³	Shepherd's purse ¹
Bedstraw, smooth ³	Henbit ¹	Sticklepod ¹
Beggarweed, Florida ¹	Horsenettle, Carolina ³	Sida, prickly(Teaweed) ¹
Bindweed, field, hedge and Texas ³	Ironweed ³	Smartweed, green and Pennsylvania ¹
Broomweed, common ¹	Jimsonweed ¹	Smartweed, swamp ³
Buckwheat,wild ¹	Knapweed, black and Russian ³	Snakeweed, broom ³
Buffalobur ¹	Knapweed, diffuse and spotted ²	Sneezeweed, bitter ¹
Burcucumber ¹	Knotweed ¹	*Sorrel, red (Sheepsorrel) ³
Burdock, common ²	Kochia ¹	Sowthistle ³
*Bursage (Bur ragweed, lakeweed, Povertyweed) and woolyleaf (Lakeweed) ³	Ladysthumb ¹	Sowthistle, annual and spiny ¹
Buttercup, roughseed ¹	Lambsquarters, common and triazine-resistant ¹	Sowthistle, perennial ³
Buttercup, tall ³	Lettuce, prickly ¹	Spikeweed, common ¹
Campion, bladder ³	Mallow, common and venice ¹	Spurge, leafy ³
Carpetweed ¹	Mallow, dwarf ²	Spurge, prostrate ¹
Carrot, wild (Queen Anne's lace) ²	Mare's tail (Horseweed) ¹	Spurry, corn ¹
Catchfly, nightflowering ¹	Mayweed ¹	Starbur, bristly ¹
Chamomile, corn ¹	Milkweed, climbing, common, honeyvine and western whorled ³	Stumpweed, rough ¹
Chickweed, common ¹	Morningglory, ivyleaf and tall ¹	Sundrop, halfshrub (Evening primrose) ³
Chickweed (Mouseear, Canada) and field ³	Mustard, tansy and wild ¹	Sunflower, common (wild) and volunteer ¹
Chicory ³	Mustard (Yellowtops) ¹	Sweetclover ²
Clovers (annual) ¹	Nettle, stinging ³	Teasel ²

*Clover, hop ³	Nightshade, black ¹	Thistle, bull, milk, musk and plumeless ²
Cockle, corn and cow ¹	Nightshade, silverleaf (White horsenettle) ³	Thistle, Canada ³
Cockle, white ²	Onion, wild ³	Thistle, Russian ¹
Cocklebur, common ¹	Pennycress, field (Fanweed, Frenchweed, Stinkweed) ¹	Toadflex, Dalmation ³
Croton, tropic and wooly ¹	Pepperweed, Virginia (Peppergrass) ¹	Tropical soda apple ³
Croton, wooly ¹	Pigweed, prostrate, redroot (Carelessweed), rough, smooth, tumble and triazine-resistant ¹	Trumpet creeper (Buckvine) ³
Daisy, English ¹	Poorjoe ¹	Velvetleaf ¹
*Dandelion, common ³	Plantain, bracted ²	Vetch ³
*Dock, broadleaf (Bitterdock) and curly ³	*Plantain, broadleaf ³	Waterhemlock ³
Dogbane, hemp ³	Plantain, buckthorn ³	Waterhemp ¹
*Dogfennel (Cypressweed) ³	Pokeweed ³	Waterprimrose, creeping ³
Evening primrose, common ²	Puncturevine ¹	Waterprimrose, winged ¹
Evening primrose, cutleaf ¹	Purslane, common ¹	*Woodsorrel, creeping and creeping common yellow ³
Fern, bracken ³	Pusley, Florida ¹	Wormwood, annual ¹
Fleabane, annual ¹	Radish, wild ¹	Wormwood common and Louisiana ³
Garlic, wild ³	Ragweed, common, giant (Buffaloweed), and lance-leaf ¹	*Yankee weed ³
Geranium, Carolina ²		

¹Annual²Biennial³Perennial

*May be controlled at rates lower than those listed for other perennial weeds in specific crop sections of this label.

Topeka gives control of the following woody brush and vine species:

Alder, Ash, Aspen, Basswood, Beech, Birch, Black Locust Cherry, Chinquapin, Cottonwood, Cucumbertree, Eastern persimmon, Elm, Fringe sagebrush, Grape, Hemlock, Hickory, Honeylocust, Honeysuckle, Hornbeam, Huckleberry, Huisache, Kudzu, Maple, Mesquite, Oak, Pine, Poison ivy, Poison Oak, Poplar, Rabbitbrush, Russian olive, Sassafras, Serviceberry, Spicebush, Spruce, Sumac, Sycamore, Tarbush, Willow, Witchhazel

Topeka will give growth suppression of the following woody brush and vine species:

Blackberry, Blackgum, Cedar, Creosotebush, Dewberry, Dogwood, Eastern Redcedar, Hawthorn (Thornapple), McCartney rose, Multiflora rose, Sand plum (wild plum), Sweetgum, Yaupon, Yucca

INDIVIDUAL USE DIRECTIONS

ASPARAGUS FOR USE ONLY IN THE STATES OF CALIFORNIA, OREGON AND WASHINGTON

Topeka is effective against emerged and actively growing weeds. Application rate is ½ to 1 pint Topeka (¼ to ½ lb. a.i.) per treated acre, diluted in 40 to 60 gallons of water. Application should be made immediately after cutting the field, and at least 24 hours before the next cutting.

Topeka will control black mustard, redroot pigweed (Carelessweed), sowthistle (annual) and thistle (Canadian and Russian). Additionally, at the higher, 1 pint per acre rate, Topeka will control common chickweed, field bindweed, milk thistle, nettleleaf goosefoot and wild radish. Tank mixing Topeka with 2,4-D or glyphosate will improve control of Canadian thistle and field bindweed.

Important:

- Pre-harvest interval for asparagus is 24 hours.
- For multiple/repeat applications, do not apply more than 1 pint of Topeka per treated acre per crop year.
- Do not use in the Coachella Valley of California.
- Crooking (twisting) of some spears may occur if spray contact emerged spears. Spears affected with crooking should be discarded.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

FIELD, SEED*, POPCORN*, AND SILAGE CORN

In corn, Topeka controls many annual broadleaf weeds and suppresses growth of many perennial broadleaf weeds (see **WEED LIST**).

Restrictions:

- Topeka is not registered for use on sweet corn.

- DO NOT use this product on GMO dicamba tolerant corn.

*To avoid potential injury of sensitive varieties, do not apply Topeka to popcorn or seed corn unless you have verified with your supplier or local seed corn company the selectivity of Topeka on your variety or inbred line of popcorn.

Application of Topeka when weeds have emerged and are actively growing gives best performance.

See following sections for specific rate information regarding Topeka alone and with tank mix partners.

PREPLANT/PREEMERGENCE IN NO-TILLAGE CORN

Topeka can be applied to emerged and actively growing broadleaf weeds before, during or after planting. Apply 1 pint Topeka per treated acre to medium or fine textured soils containing 2% or greater organic matter. On coarse textured soils (sand, sandy loam, loamy sand) or on medium and fine textured soils with less than 2% organic matter, use ½ pint Topeka per treated acre.

Topeka should be applied after 4 to 6 inches of regrowth has occurred when planting into a legume sod (e.g., clover or alfalfa).

PREEMERGENCE IN CONVENTIONAL OR REDUCED TILLAGE CORN

Apply Topeka after planting but before corn emerges.

Apply 1 pint Topeka per treated acre to medium or fine textured soils containing 2% or greater organic matter. DO NOT apply on coarse textured soils (sand, sandy loam, loamy sand) until after crop emergence. (Early Postemergence).

When Topeka is applied preemergence, it does not require mechanical incorporation to become active; however if application is not followed by adequate rainfall or sprinkler irrigation, a shallow mechanical incorporation is recommended. Use of tillage equipment which concentrates treated soil over the seed furrow (e.g., drags, harrows) should be avoided.

EARLY POSTEMERGENCE (All Tillage Systems)

(Spike Through 8 inch Tall Corn)

Apply Topeka at 1 pint per acre between emergence of corn up to 5-leaf stage, or 8 inches in height, whichever comes first.

Application rate of Topeka early postemergent on coarse textured soils (sand, sandy loam, loamy sand) should be reduced to ½ pint per treated acre.

If 6th true leaf is emerging from whorl or corn is greater than 8 inches tall, follow directions for Late Postemergence application.

LATE POSTEMERGENCE (All Tillage Systems)

(8 to 36 inch Tall Corn)

Apply Topeka at ½ pint per treated acre 15 days before tassel emergence, or to corn that is between 8 and 36 inches tall, whichever comes first.

Make applications to weeds less than 3 inches tall, for best performance.

Use a directed spray application when sensitive crops are growing nearby, if corn leaves prevent proper spray coverage, or if Topeka is tank mixed with a 2,4-D product.

Topeka should not be applied if soybeans are growing nearby when corn is taller than 24 inches, if soybeans are taller than 10 inches and/or soybeans have begun to bloom.

Overlay (Sequential) Treatments

Topeka can be applied to ground that has undergone prior treatment with a herbicide containing one or more of the following pesticide active ingredients registered for use on corn: Acetochlor, alachlor, atrazine, butylate, clopyralid, dimethenamid, diglicolamine salt of dicamba (Clarity), eptam (EPTC, or s-ethyl dipropylthiocarbamate), flumetsulam, glyphosate, halosulfuron, metolachlor, paraquat, pendimethalin, potassium salt of dicamba, propachlor, simazine, s-metolachlor.

Apply Topeka at ½ pint per treated acre to ground that has undergone prior treatment with full rates of products containing diglicolamine or potassium salts of dicamba. Two weeks should elapse between applications.

Read and follow label directions for products containing any of the above listed active ingredients.

Tank Mix Treatments for Corn

This product may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

Nicosulfuron

Early Postemergent or Late Postemergent (All Tillage Systems): ½ to 1 oz. a.i./A

- With corn taller than 8 inches, drop pipes should be used to direct spray beneath corn leaves, to reduce risk of injury to corn, and to improve spray coverage of weeds.
- Application to emerged weeds can be made to corn up to 2 feet tall.
- 0.25% (v/v) of a nonionic surfactant can be used with this tank mixture.

Atrazine

Preplant Preemergent (No Tillage Corn), Preemergent (Conventional or Reduced Tillage Corn), Early or Late Postemergent (All Tillage Systems): 1 ¼ to 2 lbs. a.i./A

- With corn up to 5 inches in height, crop oil concentrate can be used.
- Do not apply if corn is taller than 1 foot in height.
- Make application before grasses are 1 ½ inches tall.
- Follow Federal and State restrictions for atrazine.

Primisulfuron

Early and Late Postemergent (All Tillage Systems): 0.31 to 0.62 oz. a.i./A

- With corn taller than 8 inches, drop pipes should be used to direct spray beneath corn leaves, to reduce risk of injury to corn, and to improve spray coverage of weeds.
- Application to emerged weeds should be made to corn that is between 4 inches and 2 feet tall.
- 0.25% (v/v) of a nonionic surfactant can be used with this tank mixture.

Metolachlor

Preplant Preemergent (No Tillage Corn), Preemergent (Conventional or Reduced Tillage Corn), early Postemergent (All Tillage Systems): 1.5 to 2.65 lbs. a.i./A

- Pay careful attention to metolachlor labels and use rates per various soil types.
- Tank mix should be used preemergent only on medium or fine textured soils with an organic matter content equal to or greater than 2.5%.
- Application can be made while corn is up to 3 inches in height, and on grasses that have not yet reached the 2-leaf stage.
- Topeka can also be tank mixed with S-metolachlor products. Carefully read S-metolachlor product labels for proper directions for use.

Dimethenamid

Preplant Preemergent (No tillage corn), Preemergent (Conventional or reduced tillage corn), Early Postemergent (All Tillage Systems): 0.75 to 1.5 lbs. a.i./A

- Pay careful attention to dimethenamid labels and use rates per various soil types.
- Tank mix should be used preemergent only on medium or fine textured soils with an organic matter content equal to or greater than 2.5%.
- Apply to corn up to 8 inches in height. If grass weeds are taller than 1 inch at the time of application, a herbicide that provides postemergent grass weeds should also be used.

Paraquat

Preplant preemergent (No tillage corn), Preemergent (Conventional or Reduced Tillage corn): ¼ to 1 lb. a.i./A

- Apply prior to corn emergence.
- Application can be made to emerged weeds.

Acetochlor

Preplant preemergent (No tillage), Preemergent (Conventional or Reduced tillage), Early Postemergent (All Tillage Systems): 1 ½ to 3 lbs. a.i./A

- Pay careful attention to acetochlor labels and use rates per various soil types.
- Tank mix should be used preemergent only on medium or fine textured soils with an organic matter content equal to or greater than 2.5%.
- Apply prior to corn emergence.

Alachlor

Preplant preemergent (No tillage), Preemergent (Conventional or Reduced tillage), Early Postemergent (All Tillage Systems): 1 ½ to 4 lbs. a.i./A

- Pay careful attention to alachlor labels and use rates per various soil types.
- Tank mix should be used preemergent only on medium or fine textured soils with an organic matter content equal to or greater than 2.5%.
- Application can be made while corn is up to 3 inches in height, and on grasses that have not yet reached the 2-leaf stage.
- Make application prior to grass emergence if tank mixing with a microencapsulated formulation of alachlor.

Simazine

Preplant Preemergent (No Tillage), Preemergent (Conventional or Reduced Tillage): 2 to 3 lbs. a.i./A

- Make application prior to weed or corn emergence.

Pendimethalin

Preemergent (Conventional or Reduced Tillage), Early Postemergent (All Tillage Systems): $\frac{3}{4}$ to 1 $\frac{1}{2}$ lbs. a.i./A

- Pay careful attention to pendimethalin labels and use rates per various soil types.
- Tank mix should be used preemergent only on medium or fine textured soils with an organic matter content equal to or greater than 2.5%.
- Apply immediately after planting, prior to weed emergence.
- Apply to corn that is at the 2-leaf growth stage or smaller.

Glyphosate

Preplant Preemergent (No Tillage), Preemergent (Conventional or Reduced Tillage): 1 to 3 lbs. a.i./A

- Application should be made prior to corn emergence.
- Application can be made to emerged weeds.

Clopyralid

Early or Late Postemergent (All Tillage Systems): 0.035 to 0.07 lb. a.i./A

- With corn taller than 8 inches, drop nozzles should be used to direct spray.
- Application can be made to corn after emergence up to 2 feet tall.
- 0.25% (v/v) of a nonionic surfactant can be used with this tank mixture.
- For use against thistle, apply prior to bud stage, but when a majority of the weeds have emerged and are 4 inches or taller.
- Lower use rates may only provide seasonal thistle suppression, while higher rates can be used for heavier infestations or stand reduction of larger thistle plants.

Pyridate

Early Postemergent (All Tillage Systems): 0.47 lb. a.i./A

Late Postemergent (All Tillage Systems): 0.47 to 0.94 lb. a.i./A

- When corn has reached a size that prevents proper spray coverage, directed applications are recommended.
- Applications can be made to emerged, actively growing weeds.

2,4-D

Preplant Preemergent (No Tillage), Preemergent (Conventional or Reduced Tillage): $\frac{1}{4}$ to $\frac{1}{2}$ lb. a.i./A

Late Postemergent (All Tillage Systems): $\frac{1}{8}$ lb. a.i./A

- Use on Early Postemergent corn is not recommended.
- With corn taller than 8 inches, drop pipes should be used.
- Keeping spray away from corn leaves and whorl will improve coverage of weed foliage.
- Likelihood of crop injury is reduced if tank mix spray is kept off corn leaves and out of whorl.

Restrictions:

- Do not exceed 1 $\frac{1}{2}$ pints Topeka per treated crop acre per year.
- DO NOT use this product on GMO dicamba tolerant corn.
- Do not make more than 2 applications of Topeka in a 12 month period. Two weeks or more should elapse between applications of Topeka.
- Adverse conditions (such as lack of soil moisture or low temperature) that can cause delayed or deep germination of weeds can reduce preemergence control of cocklebur, velvetleaf and jimsonweed.
- To help avoid potential injury to sensitive varieties, Topeka should not be applied to seed or popcorn without verifying product selectivity on your variety of popcorn or inbred line with your supplier.
- Avoid direct contact of Topeka with corn seed. If corn seeds are not at least 1 $\frac{1}{2}$ inches below soil surface, application should be delayed until corn has emerged.
- Temporary leaning could result from applications of Topeka to corn during periods of rapid growth. Leaning will typically subside within 3 to 7 days. To avoid breakage, delay cultivation until corn is growing normally.
- To improve postemergence weed control (particularly in dry growing conditions), add sprayable fertilizers* or agriculturally approved surfactants to the spray mixture.
 - *spray grade ammonium sulfate (2.5 lbs. per acre – not for use in CA)
 - *Urea ammonium nitrate ($\frac{1}{2}$ to 1 gallon per acre of 28%, 30%, or 32% solution)
- Crop injury may result from use of adjuvants containing penetrants such as petroleum based oils, if used after crop emergence.
- Once corn has reached the ensilage (milk) stage or later, it may be harvested or grazed for feed.

COTTON

EXCEPT CALIFORNIA

Topeka can be applied preplant to control emerged broadleaf weeds prior to planting cotton in conventional or conservation tillage systems.

Application Rate: Up to 8 fl. oz. Topeka per acre.

Application Timing: Application when rosettes are less than 2 inches across and when weeds are in the 2- to 4-leaf stage will give best performance.

A waiting interval of 21 days is required following application of this product at 8 fl. oz. per acre or less, and a minimum accumulation of 1 inch overhead irrigation or rainfall. Observe these intervals prior to planting cotton.

Restrictions:

- DO NOT use this product on GMO dicamba tolerant cotton.
- **Topeka cannot be applied to preplant cotton:**
 - West of the Rockies.
 - In geographic areas with average annual rainfall less than 25 inches.

If fall preplant (postharvest) treatment is followed by a spring preplant treatment, the combination of treatments cannot exceed 2 lbs. acid equivalent per acre.

Tank Mixes

Topeka may be tank mixed with herbicide products containing glyphosate, paraquat or prometryn, for control of grasses or additional broadleaf weeds.

SMALL GRAINS (WHEAT, BARLEY AND OATS NOT UNDERSEEDED TO LEGUMES)

Topeka can be applied before, during or after planting of small grains. Best performance is obtained when product is applied to weeds in the 2- to 3-leaf stage, and rosettes are less than 2 inches across. Temporary crop leaning can occur if Topeka is applied to small grains during periods of rapid growth, but crop yields will not be reduced.

Rates and Timing

Use Rate:

2 to 4 fluid ounces per treated acre in wheat, fall seeded barley and oats.

2 to 3 fluid ounces per treated acre in spring seeded wheat.

- Higher rates should be used for difficult to control weeds (such as cow cockle, kochia, prickly lettuce prostrate knotweed, Russian thistle, wild buckwheat).
- Higher rates should be used for dense vegetative growth.
- For applications prior to the emergence of weeds, use a minimum of 3 fluid ounces per acre of Topeka with a tank mix partner.
- The best spectrum of weed control is obtained when Topeka is used in a tank mix with other herbicides. Better management of herbicide tolerant or resistant weeds is obtained. Refer to specific small grains for application timing and product rate.
- When sulfonylurea-resistant weeds are present or suspected, use a minimum of 3 fluid ounces per treated acre of this product with a tank mix partner (non-sulfonylurea herbicides, such as 2,4-D or MCPA offer more consistent control of sulfonylurea-resistant weeds).
- When tank mixing with sulfonylurea herbicides (chlorosulfuron, metsulfuron-methyl, thifensulfuron, triasulfuron, tribenuron-methyl), use 1 to 4 pints of a surfactant (at least 80% a.i.) that is approved for agricultural use per 100 gallons of spray (not more than 0.25 to 0.5% by volume). Higher rates of surfactant should be used when lower rates of herbicides are used, or when treating difficult to control or mature weeds, or dense vegetative growth.
- Pre-harvest interval (PHI): Wait a minimum of 7 days after the last application of this product before harvesting wheat, barley and oat grain.

When using this product, follow Directions for Use and Precautions, and all Mixing, Cleaning and Application instructions for Topeka and for any tank mix partner.

If small grains are to be used for hay or pasture, observe the following restrictions:

- Do not remove animals from treated area for slaughter less than 30 days after last application.
- Do not allow lactating dairy animals to graze treated areas for 7 days after treatment.
- No waiting period is necessary between treatment and grazing for non-lactating dairy animals.
- Pre-harvest interval is 37 days.

WEEDS CONTROLLED

Topeka alone or in combination with listed tank mix partners will control or suppress ANNUAL broadleaf weeds indicated below. Tank mixing Topeka with other herbicides will provide improved control of listed weeds. Refer to specific small grains for tank mix options.

These weeds will be controlled with Topeka:

Buckwheat, Tartary	Kochia	Pigweed, Redroot (Carelessweed)
Buckwheat, Wild	Ladysthumb	Pigweed, Rough
Chamomile, Corn	Lambsquarters, Common	Pigweed, Tumble
Cockle, Corn	Lettuce, Prickly	Smartweed, Green
Cockle, Cow	Mallow, Common	Smartweed, Pennsylvania
Cocklebur, Common	Mustard, Tansy	Sowthistle, Annual
Henbit	Nightshade, Black	Sunflower, Common (Wild)
Knawel (German Moss)	Pennycress, Field (Fanweed, Frenchweed,	Thistle, Russian
Knotweed, Prostrate	Stinkweed)	Velvetleaf

The following weeds will be controlled with Topeka tank mixtures. Tank mix partner label should be consulted regarding control of specific weeds:

Alkanet	Groundsel, Common	Poppy, Red Horned
Bedstraw, Catchweed	Hempnettle	Puncturevine
Carpetweed	Jacobs Ladder	Purslane, Common
Chervil, Bur	Lettuce, Miners	Radish, Wild
Chickweed, Common	Mayweed, Chamomile (Dogfennel)	Ragweed, Common
Cornflower (Bachelor button)		Ragweed, Giant (Buffaloweed)
Dragonhead, American	Mustard, Blue (Purple)	Rocket, London
Evening Primrose, Cutleaf	Mustard, Treacle	Rocket, Yellow
Falseflax, Smallseeded	Mustard, Tumble (Jim Hill)	Salsify (Goatsbeard)
Fiddleneck (Tarweed)	Mustard, Wild	Shepherd's purse
Flixweed	Nightshade, Cutleaf	Sorrel, Red (Sheep Sorrel)
Fumitory	Pepperweed, Peppergrass	Starthistle, Yellow
Gromwell, Corn	Pineappleweed	Vetch

For these broadleaf weeds, tank mixes with Topeka will control seedlings and provide suppression of established weeds:

Bindweed, Field	Nightshade, Silverleaf (White)	Plantain, Broadleaf
Dandelion, Common	Horsenettle)	Thistle, Canada
Dock, Curley		Yarrow, Common

Fall and Spring Seeded Wheat

Apply to fall seeded wheat before it reaches the jointing stage.
Apply to spring seeded wheat before it exceeds the 5-leaf stage.

Tank Mix Treatments

Apply 2 to 4 fl. oz. of Topeka with the following tank mix partners. See bullets at the end of this section for specific use precautions and restrictions.

2,4-D (amine or ester)

0.25 to 0.375 lb. 2,4-D a.i. (8 to 12 fl. oz. of a 4 lbs./gal. 2,4-D end use product) per acre

MCPA (amine or ester)

0.25 to 0.375 lb. MCPA a.i. (8 to 12 fl. oz. of a 4 lbs./gal. MCPA end use product) per acre

Metsulfuron-methyl

$\frac{1}{10}$ oz. of a 60% DF metsulfuron-methyl end use product per acre

Triasulfuron

0.28 fl. oz. of a 75% DF triasulfuron end use product per acre

Tribenuron-methyl

$\frac{1}{8}$ oz. of a 75% DF tribenuron-methyl end use product per acre

Thifensulfuron + Tribenuron-methyl

$\frac{1}{8}$ oz. of a 75% DF thifensulfuron + tribenuron-methyl end use product per acre

Chlorsulfuron + Metsulfuron-methyl

$\frac{1}{8}$ oz. of a 75% DF chlorsulfuron + metsulfuron-methyl end use product per acre

Chlorsulfuron

$\frac{1}{8}$ oz. of a 75% DF chlorsulfuron end use product per acre

Bromoxynil

1 to 1 $\frac{1}{2}$ pints of a 2 lbs./gal. bromoxynil end use product per acre

Bromoxynil + MCPA

1 to 2 pints of a 4 lbs./gal. bromoxynil + MCPA end use product per acre

Clopyralid

¼ to ½ pint of a 3 lbs./gal. clopyralid end use product per acre

Clopyralid + 2,4-D

2 to 2 ⅔ pints of a 2.38 lbs./gal. clopyralid + 2,4-D end use product per acre

Diuron

½ to 1 ½ lbs. of an 80% DF diuron end use product per acre on fall seeded wheat only

Metribuzin

1 to 10 oz. of a 75% DF metribuzin end use product per acre on fall seeded wheat only

Note:

- Early developing wheat varieties such as TAM 107, MADISON, or WAKEFIELD must receive application between early tillering and the jointing stage. Care should be taken in staging these varieties to be certain that the application occurs prior to the jointing stage.
- Do not use low rates of sulfonyl ureas (chlorosulfuron, metsulfuron-methyl, thifensulfuron, triasulfuron, tribenuron-methyl) on dense vegetative growth or on more mature weeds.
- Herbicides containing the same active ingredient in a different formulation may be used. Check application rate and timing before use.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.

Special Use Tank Mixes for Spring and Fall Seeded Wheat

Apply 3 to 4 fluid ounces of Topeka with the following tank mix partners. See bullets at the end of this section for additional Topeka application rates, as well as specific use precautions and restrictions.

2,4-D or MCPA (amine)

0.5 to 1.0 lb. 2,4-D or MCPA a.i. (1 to 2 pts. of a 4 lbs./gal. 2,4-D or MCPA end use product per acre)

2,4-D or MCPA (ester)

0.5 to 0.75 lb. 2,4-D or MCPA a.i. (1 to 1.5 pts. of a 4 lbs./gal. 2,4-D or MCPA end use product per acre)

Metsulfuron-methyl

1/20 to 1/10 oz. of a 60% DF metsulfuron-methyl end use product per acre

Triasulfuron

0.14 to 0.28 oz. of a 75% DF triasulfuron end use product per acre

Chlorsulfuron

⅓ oz. of a 75% DF chlorsulfuron end use product per acre

Chlorsulfuron + Metsulfuron-methyl

⅓ to ½ oz. of a 75% DF chlorsulfuron + metsulfuron-methyl end use product per acre

Thifensulfuron + Tribenuron-methyl

⅓ to ½ oz. of a 75% DF thifensulfuron + tribenuron-methyl end use product per acre

Glyphosate

12 to 16 fl. oz. of a 3 lbs./gal. glyphosate end use product per acre

Topeka at 2 fl. oz. may be applied with no waiting period prior to planting with any glyphosate formulation labeled for use as a preplant application to small grains. Follow label directions for adjuvant use recommendations.

Use Topeka (3 to 4 fl. oz.) with the following tank mix partners for improved control of Russian thistle, flixweed, gromwell, mayweed and fiddleneck:

Metsulfuron-methyl plus 2,4-D (amine or ester)

1/10 oz. of a 60% DF metsulfuron-methyl end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Triasulfuron plus 2,4-D (amine or ester)

0.14 to 0.28 oz. of a 75% DF triasulfuron end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Tribenuron-methyl plus 2,4-D (amine or ester)

0.25 oz. of a 75% DF tribenuron-methyl end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Chlorsulfuron + Metsulfuron-methyl plus 2,4-D (amine or ester)

1/8 to 1/4 oz. of a 75% DF chlorsulfuron + metsulfuron-methyl end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Chlorsulfuron plus 2,4-D (amine or ester)

0.2 oz. of a 75% DF chlorsulfuron end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Triasulfuron plus 2,4-D (amine or ester)

0.14 to 0.28 oz. of a 75% DF triasulfuron end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Thifensulfuron + Tribenuron-methyl plus 2,4-D (amine or ester)

1/8 to 1/4 oz. of a 75% DF thifensulfuron + tribenuron-methyl end use product plus 8 fl. oz. of a 2,4-D 4 lbs./gal. end use product per acre

Note:

- Topeka can be used at 6 fl. oz. in western OR as a spring application only on fall seeded wheat.
- For suppression of perennial weeds (such as bindweed), Topeka can be used up to 8 fl. oz. in CO, KS, NM, OK, and TX on fall seeded wheat that has passed the 3-leaf stage.
- Make application in the fall before a killing freeze (**NOTE** – can be applied following a frost).
- Higher rate of 2,4-D or MCPA (ester or amine) is for use on fall seeded wheat only. Unless potential for crop injury will be acceptable, do not use.
- Tank mix with 2,4-D amine at a rate of 8 fl. oz. after wheat begins to tiller.
- Cold and wet weather and other periods of extended stress can increase the possibility of crop injury. For fall applications, do not use unless potential for crop injury is acceptable.
- Do not use low rates of sulfonyl ureas (chlorosulfuron, metsulfuron-methyl, thifensulfuron, triasulfuron, tribenuron-methyl) on dense vegetative growth or on more mature weeds.
- Herbicides containing the same active ingredient in a different formulation may be used. Check application rate and timing before use.
- Follow the Directions for Use, Precautionary Statements, Application Rates and Timings and any other restrictions found on the product labeling for each tank mix product used.

Fall and Spring Seeded Barley

Apply this product to fall seeded barley before the jointing stage.

Apply this product to spring seeded barley (including spring seeded varieties that are seeded during winter months or later) at the 4-leaf stage or earlier.

Tank Mix Treatments

Apply 2 to 4 fl. oz. Topeka to fall seeded barley or 2 to 3 fl. oz. of Topeka to spring seeded barley with the following tank mix partners:

2,4-D

0.25 lb. 2,4-D a.i. (8 fl. oz. of a 4 lbs./gal. 2,4-D end use product) per acre in fall seeded barley

MCPA

0.25 to 0.375 lb. MCPA a.i. (8 to 12 fl. oz. of a 4 lbs./gal. MCPA end use product) per acre

Metsulfuron-methyl

1/20 to 1/10 oz. of a 60% DF metsulfuron-methyl end use product per acre

Triasulfuron

0.14 to 0.28 fl. oz. of a 75% DF triasulfuron end use product per acre

Tribenuron-methyl

1/12 to 1/6 oz. of a 75% thifensulfuron + tribenuron-methyl end use product per acre in fall seeded barley

1/8 to 1/4 oz. of a 75% thifensulfuron + tribenuron-methyl end use product per acre in spring seeded barley

Thifensulfuron + Tribenuron-methyl

1/12 to 1/6 oz. of a 75% thifensulfuron + tribenuron-methyl end use product per acre in fall seeded barley

1/8 to 1/4 oz. of a 75% thifensulfuron + tribenuron-methyl end use product per acre in spring seeded barley

Chlorsulfuron

1/8 oz. of a 75% DF chlorsulfuron end use product per acre

Chlorsulfuron + Metsulfuron-methyl

¼ to ½ oz. of a 75% DF chlorsulfuron + metsulfuron-methyl end use product per acre

Metribuzin

1 to 10 oz. of a 75% DF metribuzin end use product per acre

Bromoxynil

1 to 1 ½ pints of a 2 lbs./gal. bromoxynil end use product per acre

Bromoxynil + MCPA

¾ to 1 ½ pints of a 4 lbs./gal. bromoxynil + MCPA end use product per acre

Note:

- Do not use low rates of sulfonyl ureas (chlorsulfuron, metsulfuron-methyl, thifensulfuron, triasulfuron, tribenuron-methyl) on dense vegetative growth or on more mature weeds.
- Herbicides containing the same active ingredient in a different formulation may be used. Check application rate and timing before use.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.

Fall and Spring Seeded Oats

Apply this product to spring seeded oats at the 5-leaf stage or earlier.

Apply this product to fall seeded oats before the jointing stage.

Tank Mix Treatments**MCPA**

Tank mix 2 to 4 fl. oz. Topeka plus .25 to .375 lb. MCPA a.i. per acre (8 to 12 fl. oz. of a 4 lbs./gal. MCPA end use product).

This product may be tank mixed with one or more of the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions.

SORGHUM (MILO)

Topeka will control many actively growing annual broadleaf weeds, and will control seedlings of and reduce competition from established perennial weeds (see Weeds list).

Application Rate

Topeka can be applied at ½ pint (¼ lb. a.i.) per treated acre (broadcast).

Application Timing

Preemergence: At least 15 days prior to planting, apply Topeka to emerged and actively growing weeds.

Postemergence: After sorghum is in the spike stage (all sorghum emerged) but before sorghum has reached 15 inches in height.

Applying Topeka to sorghum in the 3- to 5-leaf stage, and when weeds are less than 3 inches tall results in best performance. If sorghum is taller than 8 inches, use drop pipes (drop nozzles).

To improve spray coverage of weed foliage and reduce likelihood of crop injury, keep spray off sorghum leaves and out of whorl.

Pre-Harvest Uses**For Use Only In the States of Texas and Oklahoma**

After sorghum has reached soft dough stage, Topeka may be applied for weed suppression. Performance is approved with the addition of an agriculturally approved surfactant.

Application Rate

Topeka can be applied at ½ pint (¼ lb. a.i.) per treated acre (broadcast).

Apply in at least 2 gallons of water-based carrier per treated acre when applying aerially.

Pre-harvest Interval (PHI): Wait a minimum of 30 days after the last application of this product before harvesting sorghum grain and fodder. Wait a minimum of 20 days before harvesting sorghum forage.

Tank Mix Treatments**Topeka plus Atrazine**

0.5 to 2 lbs. atrazine mixed with ½ pint Topeka per treated acre.

- For improved control of broadleaf weeds (emerged, actively growing), including triazine-resistant species, use atrazine up to 1.25 lbs. a.i./A.

- For added suppression of perennial broadleaf weeds, use atrazine up to 1.25 lbs. a.i./A.
- For control of grasses up to 1.5 inches in height, use atrazine at 2 lbs. a.i./A.
- Making application when sorghum is 3-8 inches tall and when weeds are less than 6 inches tall will give best performance and will result in minimal crop injury.
- Make application of atrazine before sorghum is beyond 1 foot tall.
- Atrazine rate will depend on length of residual weed control desired and upon soil texture.
- Follow all Federal and State restrictions regarding atrazine.

Topeka plus Bromoxynil

1 ½ pints of a 2 lbs./gal. bromoxynil product mixed with ½ pint Topeka per treated acre.

- Make application to sorghum that is between 4-leaf stage to 15 inches in height.
- For sorghum taller than 8 inches, drop nozzles should be used to direct spray beneath sorghum leaves.

Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.

Overlay (Sequential) Treatments

Topeka can be applied to ground that has undergone prior treatment with a herbicide containing one or more of the following herbicides:

Alachlor (4.0)*, atrazine** (2.5)*, metolachlor*** (1.6)*, propachlor (5)*

*NOTE – numbers in parentheses indicate maximum lbs. a.i. per treated acre.

**Maximum use rate for atrazine is determined by soil type, tillage practices used, surface residue, and State or local restrictions.

Follow the more restrictive requirements when determining the maximum use rate for atrazine.

***Metolachlor should be used on sorghum seed that has been treated with a fluxofenin or other protective seed treatment product.

Important:

- Follow all Directions for Use, Precautions (including references to crops growing under stress), Mixing and Application Instructions.
- Do not make more than one application per growing season.
- Temporary leaning of plants or rolling of leaves (typically outgrown within 10-14 days) can occur if Topeka is applied to sorghum during periods of rapid growth.
- Sorghum must reach mature grain stage before grazing or feeding treated sorghum forage or silage. See Pasture Use section for sorghum grown for pasture or hay.
- If sorghum is grown for seed production, do not apply this product.

SUGARCANE

Topeka will control many broadleaf weeds (Annual, Biennial and Perennial – Refer to **WEED LIST**) typically found in sugarcane, when applied at listed rates.

Rates and Timing:

Annual weeds (small, actively growing): Apply ½ to 1 pint Topeka (¼ to ½ lb. a.i.) broadcast per treated acre.

Annual weeds (established): Apply 1 to 1 ½ pints Topeka (½ to ¾ lb. a.i.) broadcast per treated acre.

Biennial weeds: Apply 1 to 2 pints Topeka (½ to 1 lb. a.i.) broadcast per treated acre.

Perennial weeds: Apply 2 pints Topeka (1 lb. a.i.) broadcast per treated acre.

Tank Mix Treatments

For control of additional broadleaf weeds or grasses, Topeka can be tank mixed with one or more herbicides containing the following active ingredients:

Ametryn (¾ to 8 lbs. a.i. per treated acre)

Asulam (2 to 3 ½ lbs. a.i. per treated acre)

Atrazine (¾ to 4 lbs. a.i. per treated acre)

2,4-D (½ to 3 lbs. a.i. per acre) (**NOTE** – application of Topeka plus 2,4-D at higher listed range could result in crop injury.)

Important:

- Apply Topeka before the close-in stage of sugar cane, and any time after weeds have emerged and are actively growing.
- Higher listed amounts of Topeka should be used when treating dense vegetative growth.
- To minimize likelihood of crop injury, direct spray beneath sugarcane canopy when possible.
- To maximize spray coverage of weed foliage, use directed spray application.
- When retreating sugarcane, do not apply more than 4 pints Topeka (2 lbs. a.i.) per treated acre per year.
- Read and follow Mixing and Application instructions, and observe all precautions.
- When using with a tank mix, follow the tank mix partner label regarding Directions for use, weeds controlled, rates and timing, geographic and other restrictions and precautionary statements.
- State or local authorities should be consulted regarding possible application restrictions, particularly concerning special local use situations or aerial applications.
- Pre-harvest interval (PHI): Wait a minimum of 87 days after the last application of this product before harvesting sugarcane.

**FALL AND SPRING SEEDED TRITICALE
EXCEPT CALIFORNIA****Early Season Applications**

Apply Topeka at a rate of 2 to 4 fluid ounces.

- Make application to fall-seeded triticale prior to jointing stage.
- Make application to spring seeded triticale prior to 6-leaf stage.

Tank Mixes

Topeka tank mixed with bromoxynil will give best performance when used on triticale.

CONSERVATION RESERVE PROGRAM (CRP) ACRES

Topeka can be applied both to established grasses and newly seeded grasses or small grains (such as barley, oats, rye, sudangrass, wheat, or other cover crop grain species) grown in Conservation Reserve or Federal Set Aside Programs. Topeka will provide control or suppression of many perennial weeds and control of many annual and biennial weeds (see **WEED LIST**), when used at listed rates.

For Newly Seeded Areas, Topeka may be applied preplant or postemergence (after seedling grasses exceed the 3-leaf stage).

- If intervals between Topeka application and grass planting are less than 45 days per pint of product treated (West of Mississippi River) or 20 days per pint (East of Mississippi River), injury to new seedlings may occur.
- When applying postemergence, newly seeded grasses can be severely injured if Topeka is used at more than 1 pint per treated acre.

Perennial grasses that have been planted for one or more seasons prior to treatment are considered as Established Grass Stands. When applying Topeka at rates exceeding 1 pint per treated acre, certain grass species (bentgrass, carpetgrass, smooth brome, buffalograss, St. Augustine grass) may be injured.

Rates and Timing

For small, actively growing annuals, use Topeka at a rate of ¼ to 1 pint (⅛ to ½ lb. a.i.) broadcast per treated acre.

For biennials with rosettes less than 3 inches in diameter, use Topeka at a rate of ½ to 1 pint (¼ to ½ lb. a.i.) broadcast per treated acre.

For annuals with established weed growth, use Topeka at a rate of 1 pint (½ lb. a.i.) broadcast per treated acre.

For biennials with rosettes 3 inches or greater in diameter, use Topeka at a rate of 1 to 2 pints (½ to 1 lb. a.i.) broadcast per treated acre.

For bolting biennials or suppression of perennials, use Topeka at a rate of 2 pints (1 lb. a.i.) broadcast per treated acre.

Tank Mix Treatments

Topeka can be tank mixed with other herbicides registered for use in Conservation Reserve Programs to control grasses and additional broadleaf weeds. Consider tank mixing with herbicides containing the active ingredients 2,4-D, glyphosate, metsulfuron-methyl, paraquat, and others.

Important:

- Higher specified rates of Topeka should be used on dense or tall vegetation or for weeds growing under stressed conditions (i.e., drought, cool temperatures, etc.).
- Treat biennial weeds when they are in the rosette stage of growth for best results.
- For seedling control and escapes, biennial and perennial weeds will require sequential follow-up treatments.
- When making multiple/repeat applications, do not exceed a total of 2 quarts (2 lbs. a.i.) Topeka per treated acre per year.
- Alfalfa, clovers, lespedeza, wild inter peas, vetch and other legumes will be injured or killed if treated with Topeka.
- For newly seeded grasses, do not use adjuvants containing penetrants (such as petroleum based oils) once grass has emerged.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

PREPLANT DIRECTIONS**(POST HARVEST / FALLOW / CROP STUBBLE / SET-A-SIDE)****FOR BROADLEAF WEED CONTROL BEFORE WHEAT, CORN, SORGHUM, SOYBEANS**

Topeka, when applied preplant / postharvest will control or suppress many annual, biennial and perennial broadleaf weeds. Topeka can be applied to crop stubble / set-a-side areas, or in the fall, spring or summer during the fallow period. See 'Weeds Controlled' section under Small Grains for a list of annual broadleaf weeds controlled. The following biennial and perennial broadleaf weeds are controlled or suppressed by Topeka:

Alfalfa	Dock, curly	Smartweed, swamp
Artichoke, Jerusalem	Dogbane, hemp	Sowthistle, perennial
Bindweed, field and hedge	Garlic, wild	Spurge, leafy

Blueweed, Texas Bursage (Bur ragweed, Povertyweed, Lakeweed) Dandelion, common	Horsenettle, Carolina Knapweed, diffuse and spotted Nightshade, silver Redvine	Thistle; bull, Canada, milk, musk, plumeless, scotch Trumpet creeper (Buckyvine)
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Rates and Timing

For control of Annual weeds: Apply Topeka at a rate of ½ to 1 pint (¼ to ½ lb. a.i.) per treated acre.

For control of Biennial and suppression of Perennial weeds: Apply Topeka at a rate of 1 to 2 pints (½ to 1 lb. a.i.) per treated acre.

For control of Perennial weeds: Apply Topeka at a rate of 2 pints (1 lb. a.i.) per treated acre.

Notes:

- Apply Topeka as a broadcast or spot treatment.
- To enhance spray coverage and penetration of weed foliage, agriculturally approved spray additives (such as surfactants or oil) may be used with Topeka.
- See Cropping Restrictions (below) for interval between application and planting to prevent crop injury.
- Application of Topeka when annual weeds have not yet reached 6 inches in height and when biennial weeds are still in rosette stage will give best results.
- For best performance against perennial weed regrowth, apply Topeka in late summer or fall, after mowing or tillage treatment.
- For best control of upright perennial broadleaf weeds (such as Jerusalem artichoke or Canada thistle), make application when majority of weeds (such as field or hedge bindweed) are in or beyond the full bloom stage.
- Following application of Topeka, avoid disturbing treated areas.
- For weeds that develop from seed, rhizomes or bulblets (or other underground plant parts), applications may not kill weeds after the effective period for Topeka.
- Institute a follow-up program or use of effective cultural practices, if necessary, for seedling control.
- For use of Topeka on small grains in-crop, see Small Grains section.

Tank Mix Treatments (including Special Tank Mixes)

Topeka can be mixed with the following tank mix partners for control of grasses or additional broadleaf weeds:

Atrazine

- Mix ¼ to 1 pint Topeka with 0.5 to 0.6 pint of a 4 lbs. per gallon atrazine product or ½ to 3 ½ lbs. of a 90% DF atrazine product per treated acre for control of ANNUAL weeds.

Chlorsulfuron + Metsulfuron-methyl

- Mix ¼ to 1 pint Topeka with 0.2 oz. of a 75% DF chlorsulfuron + metsulfuron-methyl product per treated acre for control of ANNUAL weeds.

Clopyralid + 2,4-D

- Mix 1 to 2 pints Topeka with 2 to 4 pints of a 2.38 lbs./gal. clopyralid + 2,4-D product per treated acre for control of BIENNIAL and PERENNIAL weeds.

Glyphosate

- Mix ¼ to 1 pint Topeka with 8 to 48 fl. oz. of a 3 lbs./gal. glyphosate product per treated acre for control of ANNUAL weeds.
- Mix 1 to 2 pints Topeka with 1 to 5 quarts of a 3 lbs./gal. glyphosate product per treated acre for control of BIENNIAL and PERENNIAL weeds.
- Mix ½ to 1 pint Topeka with 8 to 16 fl. oz. of a 3 lbs./gal. glyphosate product per treated acre for SUPPRESSION of PERENNIAL weeds.

Glyphosate + Dicamba

- Mix ¼ to 1 pint Topeka with 22 to 44 fl. oz. of a 1.6 lbs./gal. glyphosate + dicamba product per treated acre for control of ANNUAL weeds.

Glyphosate + 2,4-D

- Mix ¼ to 1 pint Topeka with 27 to 54 fl. oz. of a 2.4 lbs./gal. glyphosate + 2,4-D product per treated acre for control of ANNUAL weeds.
- Mix 1 to 2 pints Topeka with 54 fl. oz. of a 2.4 lbs./gal. glyphosate + 2,4-D product per treated acre for control of BIENNIAL and PERENNIAL weeds.

Glyphosate + 2,4-D**Glyphosate + Dicamba**

- Mix ⅛ to ¼ pint Topeka plus 22 to 54 fl. oz. of a 2.4 lbs./gal. glyphosate + 2,4-D product or 1.6 lbs./gal. glyphosate + dicamba product for improved control of kochia, wild buckwheat and prickly lettuce (along with other annual weeds).

- Mix ¼ to ½ pint Topeka plus 22 to 54 fl. oz. of a 2.4 lbs./gal. glyphosate + 2,4-D product or 1.6 lbs./gal. glyphosate + dicamba product for improved control or suppression of field bindweed and Canada thistle.

Metribuzin

- Mix ¼ to 1 pint Topeka with 0.5 to 1 lb. of a 75% DF metribuzin product or 0.75 to 1.5 pints of a 4 lbs./gal. metribuzin product per treated acre for control of ANNUAL weeds.

Metsulfuron-methyl

- Mix ¼ to 1 pint Topeka with 0.1 oz. of a 75% DF product per treated acre for control of ANNUAL weeds.

Paraquat

- Mix ¼ to 1 pint Topeka with 1 to 2 pints of a 2 lbs./gal. paraquat product or 1.5 pints of a 2.5 lbs./gal. paraquat product per treated acre for control of ANNUAL weeds.

Picloram

- Mix 1 to 2 pints Topeka with ½ to 1 pint of a 2 lbs./gal. picloram product per treated acre for control of BIENNIAL and PERENNIAL weeds.

Pronamide

- Mix ¼ to 1 pint Topeka with 0.5 to 1 lb. of a Pronamide 50W product per treated acre for control of ANNUAL weeds.
- Mix 1 pint Topeka with ½ to 1 lb. of a Pronamide 50W product per treated acre for control of volunteer barley bulbous bluegrass, downy brome, jointed goatgrass, common rye and volunteer wheat. Apply during fallow periods, when weeds are actively growing. Plant fall seeded wheat 9 months or more after application. Application between mid-October and mid-December, prior to soil freeze up gives best performance.

Triasulfuron

- Mix ¼ to 1 pint Topeka with 0.28 to 0.35 oz. of a 75% DF triasulfuron product per treated acre for control of ANNUAL weeds.

2,4-D

- Mix ¼ to 1 pint Topeka with 1 to 2 pints (0.5 to 1 lb. a.i.) of a 4 lbs./gal. 2,4-D product per treated acre for control of ANNUAL weeds.
- Mix 1 to 2 pints Topeka with 2 to 4 pints (1 to 2 lbs. a.i.) of a 4 lbs./gal. 2,4-D product per treated acre for control of BIENNIAL and PERENNIAL weeds.

2,4-D (LV ester)

- Mix 1 pint of Topeka with 3 pints of a 4 lbs./gal. 2,4-D LV ester product per treated acre for WILD GARLIC CONTROL. Apply when wild garlic is 4-8 inches tall.

Tank Mix Notes:

- For Canada Thistle control, use Topeka, Topeka plus a 2.38 lbs./gal. clopyralid + 2,4-D product or Topeka plus a 3 lbs./gal. glyphosate product.
- For tank mixes with atrazine, metribuzin or pronamide, review tank mix partner labels carefully, as tank mixes with these products may be subject to special restrictions.
- For tank mixes with sulfonyleurea herbicides (such as chlorsulfuron + metsulfuron-methyl), use an 80% a.i. surfactant at a rate of not more than 0.25 to 0.5% by volume (such as 1 to 2 parts per 100 gallons spray). Higher specified rates of surfactant should be used with lower specified rates of tank mix partners and/or when treating dense vegetative growth or more mature weeds.
- Sulfonyleurea-resistant weeds may not be controlled with tank mixes of Topeka and sulfonyleurea products (such as chlorsulfuron + metsulfuron-methyl). Consider alternate tank mixes in this case.
- For tank mixes with 2,4-D formulations other than 4 lbs./gal., use lbs. a.i./acre listed.

Important:

- Multiple applications / retreatment can be made as needed, but do not exceed a maximum amount of Topeka (dicamba) per treated acre during any given fallow period of 4 pints product (2 lbs. a.i.).
- Perennials noted (*) on general **WEED LIST** may be controlled by using Topeka at application rates lower than specified for other listed perennial weeds (see **WEED LIST**).
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

Cropping Restrictions:

Based on use of dicamba (including Topeka and any tank mix partners) up to 2 lbs. a.i. per treated acre per year

- Corn, Sorghum, and Soybeans can be planted in spring, after applications that were made the previous year. If limited rainfall (less than 1 inch) occurs between application and first killing frost, cultivate treated acres before or immediately after ground thaw to allow herbicide to come in contact with moist soil.
- If interval between application and planting is less than specified, soybean injury may occur. Delay planting for 30 days per pint of Topeka/A in areas with greater than 30" of rainfall. Delay planting for 45 days per pint of Topeka/A in areas with 30" of rainfall or less. Do not count days when ground is frozen.
- Plant wheat in fall or spring following applications. If crop injury can be tolerated, spot applications can be made any time prior to crop emergence. If interval between application and planting is less than specified, wheat injury may occur.
- For use east of the Mississippi river, allow an interval of 20 days per pint of Topeka per treated acre (1 ¼ day per ounce). Do not count days when ground is frozen, as moisture is necessary for Topeka degradation.
- For use west of the Mississippi river, allow an interval of 45 days per pint of Topeka per treated acre (3 days per ounce). Do not count days when ground is frozen, as moisture is necessary for Topeka degradation.
- Any rotational crop may be planted following a normal harvest of barley, oats or wheat. If a shortened interval before harvest occurs (such as plowing under of cover crops), do not plant a sensitive crop.

**SUPPRESSION / CONTROL OF PERENNIAL BROADLEAF WEEDS IN CROPLAND
(SPOT APPLICATION ONLY); FOR USE ONLY IN THE STATES OF IDAHO, MONTANA, NEVADA, OREGON, UTAH AND
WASHINGTON**

Topeka controls many broadleaf weeds (including black knapweed, broadleaf dock (Bitterdock), Canada thistle, curly dock, field bindweed, leafy spurge, Russian knapweed, tansy ragwort), when applied at listed rates.

Topeka can be applied at a rate of 1 quart (1 lb. a.i.) per treated acre any time following a crop harvest to stubble fallow or other cropland. Make application when weeds are actively growing and before a killing frost. Application can be made up to one month prior to planting wheat.

Important:

- Do not make more than 1 application of Topeka per year.
- Do not apply Topeka to areas where soil remains saturated with water throughout the year or to sub-irrigated cropland.
- Unless injury to wheat or rotated barley is acceptable, do not treat with Topeka.
- One year after application, treated areas can be planted with barley, oats, corn, sorghum (milo), and annual or perennial grass crops.
- Wait two years after application to plant treated areas with broadleaf crops (such as alfalfa, beans, peas, potatoes, sugar beets).
- Three years after application, treated areas can be planted with crops grown for seed (other than perennial grass seed).
- Perennial weed seedlings that germinate from seed one or two years after treatment are not killed in most cases. Once herbicidal effects of Topeka have subsided, institute a follow-up program or use of effective cultural practices for seedling control.
- Follow mixing and application instructions and precautions on this label.

NON-CROPLAND (PASTURE, HAY, RANGELAND AND FARMSTEAD)

Topeka will provide brush control, and control of many annual, biennial and perennial broadleaf weeds, when applied at specified rates, and is recommended for use on non-cropland (pasture, hay, rangeland and farmstead, including non-irrigation ditch banks and fence rows). At listed rates, Topeka will also control many woody vine and brush species commonly found in non-cropland areas (Refer to **WEED LIST**). Topeka can also be applied (broadcast or spot treatment) in Noxious Weed Control Programs, Districts or Areas to control broadleaf weeds in non-cropland areas (railroad and pipeline rights of way, utilities, roadsides and highways). **NOTE** - Noxious weed programs may be administered at county, State or other level, however noxious weeds must be recognized at the State level.

Rates and Timing

For small, actively growing annual weeds and biennial weeds with rosettes less than 3 inches in diameter, use Topeka at a rate of ½ to 1 pint (¼ to ½ lb. a.i.) broadcast per treated acre.

For annual weeds with established weed growth, use Topeka at a rate of 1 to 1 ½ pints (½ to ¾ lb. a.i.) broadcast per treated acre.

For biennial weeds with rosettes 3 inches or more in diameter, for suppression or top growth control of perennials, and for top growth suppression of woody brush and vines, use Topeka at a rate of ½ to 1 qt. (½ to 1 lb. a.i.) broadcast per treated acre.

For control of bolting biennials and perennials, and top growth and stem control and stem suppression of woody brush and vines, use Topeka at a rate of 1 qt. (1 lb. a.i.) broadcast per treated acre.

Mixing and Application

Topeka can be applied using water, emulsions of oil in water (including invert systems), or fluid fertilizers (sprayable) as carriers. Prior to mixing (carriers or tank mix), a compatibility test should be made (see **Compatibility Test** section).

For oil in water emulsions, spray tank should be filled halfway with water, followed with appropriate amount of emulsifier. While spray tank is under continuous agitation, next add herbicide slowly, followed by oil (fuel or diesel) or oil + additional

emulsifier premix. Finish filling spray tank completely with water. To prevent oil and water from forming separate layers, vigorous agitation should be maintained during spray operation.

Spray additives such as herbicide adjuvants, penetrants, wetting agents, surfactants, emulsifiers, or drift control agents can be used with Topeka, as long as they have been agriculturally approved when used in pasture applications. All use recommendations and precautions on additive labels should be followed.

Topeka can be applied broadcast either aerially or by ground application.

- For aerial application, apply 1 to 40 gallons per treated acre of diluted spray in a water-based carrier.
- For ground application, apply 3 to 600 gallons per treated acre of diluted spray.

Weed or brush type, height and density, as well as type of ground application equipment used all affect the volume of spray applied.

Undesirable vegetation growing in individual clumps or small areas may be spot treated with a handgun or other type of application equipment used for spot treatment. Apply dilute sprays to foliage and stems up to run-off (complete wetting).

Tank Mix Treatments

For control of additional broadleaf weeds, grasses and woody brush and vines, Topeka can be tank mixed with one or more herbicides containing the following active ingredients:

Glyphosate (¾ to 3 ¾ lbs. a.i. per treated acre)

Metsulfuron-methyl (0.0038 to 0.011 lb. a.i. per treated acre)

Paraquat (½ to 1 lb. a.i. per treated acre)

Picloram (¾ to 3 lbs. a.i. per treated acre)

Triclopyr (¾ to 8 lbs. a.i. per treated acre)

2,4-D (¼ to 4 lbs. a.i. per treated acre)

A compatibility test (see **Compatibility Test** section) is recommended prior to actual tank mixing.

Important:

- When making multiple applications of Topeka, do not exceed a total of 2 quarts (2 lbs. a.i.) per treated acre per year.
- Product uses described in this section also pertain to small grains grown for pasture use only (barley, forage sorghum, oats, rye, sudangrass, and wheat).
- If vegetation to be treated is dense or tall, higher listed rates of Topeka should be used.
- Best control of biennial weeds occurs in rosette stage.
- Perennials noted (*) on General **WEED LIST** may be controlled with lower rates of Topeka or Topeka + 2,4-D (see **WEED LIST**).
- Established grass crops that are under stress can display symptoms of injury. Application of herbicides (including Topeka alone, or in a tank mix) can aggravate these symptoms.
- If Topeka is used at rates greater than 1 pint per acre, newly seeded areas, including small grains grown for pasture can be severely injured.
- If Topeka is used at rates greater than 1 pint per acre, bentgrass, carpetgrass, buffalograss, and St. Augustine grass may be injured (colonial bentgrasses are typically more tolerant than creeping types; velvetgrasses are most easily injured).
- Alfalfa, clovers, lespedeza, wild winter peas, vetch and other legumes will be killed or injured by treatments with Topeka.
- Animals to be slaughtered cannot be removed from areas treated with Topeka until 30 days after last application.
- Lactating dairy animals must not graze fields for 7 days after applications of Topeka up to 1 pint (½ lb. a.i.) per treated acre, or 21 days after applications of Topeka greater than 1 pint up to 1 quart (1 lb. a.i.) per treated acre. There is no waiting period between treatment and grazing for non-lactating animals.
- Hay to be used as feed for lactating dairy animals cannot be harvested for 37 days after applications of Topeka up to 1 pint (½ lb. a.i.) per treated acre, or 51 days after applications of Topeka greater than 1 pint up to 1 quart (1 lb. a.i.) per treated acre.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

CUT SURFACE TREE TREATMENTS

Topeka can prevent cut tree sprouts and control unwanted trees when applied as a cut surface treatment. Use in a tank mix with 2,4-D can result in more rapid foliar effects.

Rate and Application

Mix 1 part Topeka with 1 to 3 parts water. Use a more concentrated Topeka solution when treating species that are difficult to control.

Stump Treatments: Freshly cut stump surface should be sprayed or painted with Topeka solution. Be sure to thoroughly wet the area adjacent to the bark.

Frill or Girdle Treatments: Use an axe to girdle tree trunk with a series of overlapping cuts or one continuous cut. Cut surface should be sprayed or painted with Topeka solution.

DORMANT APPLICATIONS FOR CONTROL OF MULTIFLORA ROSE

Topeka can be applied as an undiluted spot concentrate directly to soil, or as an oil-water emulsion solution (LO-OIL Basal Bark treatment) to dormant multiflora rose plants.

Spot Concentrate: Apply Topeka directly to the soil at a rate dependent on canopy diameter of the multiflora rose.

For example:

Canopy Diameter	Topeka Concentration
5 feet	¼ fl. oz.
10 feet	1 fl. oz.
15 feet	2 ¼ fl. oz.

- Apply product to soil as close as possible to root crown (within 6 to 8 inches of the crown).
- Make application to the uphill side of the crown on sloping terrains.
- When snow or water prevents applying Topeka directly to the soil, do not apply.
- Do not apply more than 2 quarts Topeka per acre per year.

LO-OIL Basal Bark: Mix 1 pint of Topeka with 1 ½ pints No. 2 diesel fuel, along with 1 ounce emulsifier in 1 ½ gallons of water, to make approximately 2 gallons of LO-OIL spray (for instructions on preparing an oil-in-water emulsion, refer to Mixing and Applications in this section of the label). For different amounts of final spray solution, proportionally adjust amounts of materials. Apply LO-OIL spray solutions to the basal stem region to a height of 12 to 18 inches, starting at the ground line. Make sure to cover the root crown and spray until runoff.

- Make application when plants are dormant, for best results.
- After budbreak or if plants are showing signs of active growth, do not apply.
- When snow or water prevents applying LO-OIL spray to the ground line, do not apply.
- Do not apply more than 8 gallons of LO-OIL spray solution mix per acre per year.

TURF AND LAWNS – FOR USE IN GOLF COURSE (FAIRWAYS, APRONS, TEES, AND ROUGH), PARKS, RECREATIONAL AREAS, AND LAWN CARE APPLICATION

Topeka controls many broadleaf weeds (annual, biennial and noted (*) perennial) commonly found in turf. Additionally, Topeka will suppress the growth of many other listed woody brush and vine species and perennial broadleaf weeds (see **WEED LIST**).

Rates and Timing

Use the higher level of listed rate ranges when treating dense vegetative growth.

For small, actively growing annual weeds, and for biennial weeds with rosettes less than three inches in diameter, use Topeka at a rate of ½ to 1 pint (¼ to ½ lb. a.i.) per treated acre, or 1 to 2 ¼ teaspoons per 1,000 sq. ft.

For annual weeds with established weed growth, use Topeka at a rate of 1 to 1 ½ pints (½ to ¾ lb. a.i.) per treated acre, or 2 ¼ to 3 ¾ teaspoons per 1,000 sq. ft.

For biennial weeds with rosettes 3 inches or greater in diameter, and for perennial weeds and woody brush and vines, use Topeka at a rate of 1 to 2 pints (½ to 1 lb. a.i.) per treated acre, or 2 ¼ to 4 ½ teaspoons per 1,000 sq. ft.

Depending on spray equipment used and density or height of weeds to be treated, dilute specified amount of Topeka in 30 to 200 gallons of water per treated acre or in 3 quarts to 4 ¼ gallons of water per 1,000 sq. ft.

Tank Mix Treatments

For control of additional weed species, Topeka can be tank mixed with 2,4-D, MCPA, MCPP, Confront® or bromoxynil (see tank mix partner label for details regarding weeds controlled).

Topeka should be used at a rate of ⅓ to ½ pint (1/10 to ¼ lb. a.i.) per treated acre with:

- ½ to 1 ½ lbs. acid equivalent of 2,4-D, MCPA, or MCPP
- 1 to 2 pts. of Confront®
- ¾ to ½ lb. a.i. of bromoxynil

Established weed stands should be treated with higher specified rates of tank mix partners.

Important:

- Application to weeds that are emerged and actively growing gives best performance.
- Higher specified levels of product should be used when treating dense vegetative growth.

- Multiple/repeat applications can be made, but do not apply more than 2 pints (1 lb. a.i.) Topeka per treated acre per year.
- Delay application of Topeka until after second mowing, to avoid injury to newly seeded grasses.
- Sensitive grass species (such as bentgrass, buffalograss, carpetgrass, St. Augustine grass) can exhibit stunting or discoloration if Topeka is applied at rates higher than 1 pint (½ lb. a.i.) per treated acre.
- Where roots of sensitive plants extend, limit Topeka application rates to ¼ pint (⅛ lb. a.i.) per treated acre on coarse textured (sandy-type) soils or to ½ pint (¼ lb. a.i.) per treated acre on fine textured (clayey-type) soils.
- Where roots of sensitive plants extend, repeat applications should not be made for 30 days, and until prior application of Topeka has been activated by rain or irrigation.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

TURF – FOR USE IN FARMSTEAD (NON-CROPLAND) AND SOD FARMS

Topeka controls many broadleaf weeds (annual, biennial and noted (*) perennial) commonly found in turf. Additionally, Topeka will suppress the growth of many other listed woody brush and vine species and perennial broadleaf weeds (see **WEED LIST**).

Rates and Timing

For small, actively growing annual weeds, and for biennial weeds with rosettes less than three inches in diameter, use Topeka at a rate of ½ to 1 pint (¼ to ½ lb. a.i.) per treated acre, or 1 to 2 ¼ teaspoons per 1,000 sq. ft.

For annual weeds with established weed growth, use Topeka at a rate of 1 to 1 ½ pints (½ to ¾ lb. a.i.) per treated acre, or 2 ¼ to 3 ¼ teaspoons per 1,000 sq. ft.

For biennial weeds with rosettes 3 inches or greater in diameter, and for perennial weeds and woody brush and vines, use Topeka at a rate of 1 to 2 pints (½ to 1 lb. a.i.) per treated acre, or 2 ¼ to 4 ½ teaspoons per 1,000 sq. ft.

Depending on spray equipment used and density or height of weeds to be treated, dilute specified amount of Topeka in 30 to 200 gallons of water per treated acre or in 3 quarts to 4 ¼ gallons of water per 1,000 sq. ft.

Tank Mix Treatments

For control of additional weed species, Topeka can be tank mixed with 2,4-D, MCPA, MCPP-p or bromoxynil (see tank mix partner label for details regarding weeds controlled).

Topeka should be used at a rate of ⅓ to ½ pint (¹/₁₀ to ¼ lb. a.i.) per treated acre with:

- ½ to 1 ½ lbs. acid equivalent of 2,4-D or MCPA
- ½ lb. of MCPP-p
- ⅜ to ½ lb. a.i. of bromoxynil (Do not use tank mixes containing bromoxynil near residential areas.)

Established weed stands should be treated with higher specified rates of tank mix partners.

Important:

- Application to weeds that are emerged and actively growing gives best performance.
- Higher specified levels of product should be used when treating dense vegetative growth.
- Multiple/repeat applications can be made, but do not apply more than 2 pints (1 lb. a.i.) Topeka per treated acre per year.
- Delay application of Topeka until after second mowing, to avoid injury to newly seeded grasses.
- Sensitive grass species (such as bentgrass, buffalograss, carpetgrass, St. Augustine grass) can exhibit stunting or discoloration if Topeka is applied at rates higher than 1 pint (½ lb. a.i.) per treated acre.
- Where roots of sensitive plants extend, limit Topeka application rates to ¼ pint (⅛ lb. a.i.) per treated acre on coarse textured (sandy-type) soils or to ½ pint (¼ lb. a.i.) per treated acre on fine textured (clayey-type) soils.
- Where roots of sensitive plants extend, repeat applications should not be made for 30 days, and until prior application of Topeka has been activated by rain or irrigation.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application instructions and precautions on this label.

GRASS SEED CROPS – GRASSES GROWN FOR SEED

(SUCH AS BERMUDA GRASS, BLUEGRASS, FESCUE, RYEGRASS)

Topeka will provide control or suppression of several annual broadleaf weeds (see list, below). Tank mixing Topeka with other herbicides registered for use in Grass Seed Production will give control of additional weed species, as well as improved control of listed weeds.

These weeds will be controlled with Topeka:

Alfalfa ¹	Clover	Lambsquarters, common
Bedstraw, catchweed	Cockle, white	Lettuce, prickly
Bindweed, field	Dock, broadleaf or curly	Mayweed (Dogfennel)

Buttercup – corn, creeping or western field	Hemlock, poison Knapweed, Russian ¹	Ragwort, tansy Sorrel, red (Sheep Sorrel)
Catchfly, nightflowering	Knotweed, prostrate	Sowthistle, annual
Chamomile, corn	Kochia	Starwort, little
Chickweed, common or mouseear	Ladysthumb	Thistle, Canada ¹

¹Top Growth only

Rates and Timing

Seedling Grass: Apply ½ to 1 pint Topeka per treated acre after crop reaches 3- to 5-leaf stage.

Perennial Grass (well established): Apply 2 pints Topeka per treated acre BEFORE grass seed crop begins to joint.

Tank Mix Treatments

Apply ½ to 2 pints of Topeka with the following tank mix partners.

2,4-D (amine or ester)

0.5 to 2.0 lbs. 2,4-D a.i. (1 to 4 pints of a 4 lbs./gal. 2,4-D end use product) per acre

MCPA (amine)

0.5 to 1.0 lb. MCPA a.i. (1 to 2 pints of a 4 lbs./gal. MCPA end use product) per acre

Bromoxynil

0.25 to 0.5 lb. bromoxynil (1 to 2 pints of a 2 lbs./gal. bromoxynil end use product) per acre

Clopyralid

0.1 to 0.375 lb. clopyralid (¼ to 1 pint of a 3 lbs./gal. clopyralid end use product) per acre

Clopyralid + 2,4-D

1 ¾ to 4 pints of a 2.38 lbs./gal. clopyralid + 2,4-D end use product per acre

Diuron 80% DF

2 to 4 lbs. of an 80% dry flowable diuron end use product per acre

Important:

- Possible crop injury can occur when using Topeka on bentgrass. Do not use on bentgrass unless crop injury can be tolerated.
- Applying Topeka to weeds that are in the 2-4 leaf stage or with rosettes less than 2 inches across will give best results.
- For use on dense vegetative growth or more mature weeds, use higher specified levels of herbicide.
- Possible grazing and feeding restrictions in Non-Cropland (Pasture, Hay, Rangeland, and Farmstead) section of label must be observed.
- Follow directions for use, precautionary statements and other restrictions on labels of tank mix partners.
- Follow mixing and application and precautions on this label.

ANNUAL GRASS CONTROL

Application of Topeka in fall or late summer after harvest and burning of established grass seed crops will suppress annual grass weeds (such as downy brome, fescue, rattail, ripgut brome, windgrass).

Topeka should be applied at a rate of 2 pints product per treated acre, immediately following first irrigation, when soil is moist and when weeds are smaller than the 2-leaf stage.

WIPER APPLICATION USES

To control or suppress actively growing broadleaf weeds, brush and vines, Topeka can be applied through wiper application equipment. Apply a solution of 1 part Topeka to 1 part water.

IMPORTANT:

- Do not allow herbicide solution to contact desirable vegetation.
- Wiper application can be used only on crops (including Pastures) and Non-cropland areas described in this label, with the exception of Grain Sorghum (milo).
- Follow mixing and application instructions and precautions on this label.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained and absorbed with clay granules, sawdust or equivalent material for disposal.

PESTICIDE DISPOSAL: Triple rinse pesticide from containers and use rinsates in the pesticide application. Wastes which cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

[FOR NONREFILLABLE CONTAINERS LESS THAN 5 GALLONS:]

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[FOR NONREFILLABLE CONTAINERS GREATER THAN 5 GALLONS:]

Nonrefillable container: Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

[FOR REFILLABLE CONTAINERS GREATER THAN 5 GALLONS:]

Refillable container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ROTAM or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ROTAM and Seller harmless for any claims relating to such factors.

ROTAM warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ROTAM and to the extent consistent with applicable law, buyer and user assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW ROTAM MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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